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New York Central Lines' Financing

CAPITAL AS WELL AS LABOR must be secured by railroads at a reasonable price. Even the roads which, under present abnormal conditions, are able to show substantial net earnings must be provided with new capital when they are returned to the owning companies.

The New York Central Lines are illustrations of this fact. Quite recently the Cleveland, Cincinnati, Chicago & St. Louis sold to a syndicate of bankers, headed by J. P. Morgan & Co., and including the National City Company and the Guaranty Trust Company, both of New York, an issue of \$15,000,000 ten-year, six per cent refunding and improvement mortgage bonds. The bankers offered these bonds to the public at 98, at which price they yield a little over $6\frac{1}{4}$ per cent. At almost the same time a banking syndicate which also included the Guaranty Trust Company and the National City Company, offered to the public \$30,000,000 government of Switzerland $5\frac{1}{2}$ per cent ten-year bonds at $96\frac{1}{4}$. At this price the bonds yielded a little over six per cent on the investment. The offering price of these two issues of bonds would indicate that railroad capital can be procured at a comparatively reasonable price. The \$30,000,000 of foreign government bonds, however, were sold immediately upon the announcement of their offering. The \$15,000,000 of railroad bonds are understood to have had a fairly satisfactory market. The New York Central Lines will have to go into the market for many times the \$15,000,000 which the Big Four is raising at present. In 1918 the New York Central, itself, earned approximately the rental which the government had guaranteed to the company. The Cleveland, Cincinnati, Chicago & St. Louis and the Michigan Central earned a large surplus as over the guaranteed rentals. In regard to earning capacity, therefore, the New York Central Lines may be said to be in an exceptionally strong position as compared with most other American railroads under the present rate structure, wage scale and materials' costs, although this statement is based on the assumption that a return to private operation would not materially injure the New York Central Lines as compared with its competitors.

On December 31, 1917, the New York Central itself had loans and bills payable which amounted to over \$17,000,000 with \$15,000,000 notes maturing September 15, 1919, and a total funded debt, including these notes but not the floating debt, of \$712,000,000, as against \$250,000,000 stock outstanding. The Big Four had \$3,763,000 loans and bills payable, \$19,663,000 "miscellaneous obligations," \$6,017,000 non-negotiable debt to affiliated companies, and a total funded debt, including the miscellaneous obligations and debt to affiliated companies, but exclusive of the floating debt, of \$105,000,000, as against \$57,000,000 outstanding stock. In other words, at the beginning of government control the New York Central Lines were badly in need of new capital and the proportion of debt to stock was higher than would generally be considered desirable. The Big Four note sale shows that a comparatively small amount of new railroad capital can be raised by a company which had demonstrated earning power under present conditions, but the measure of success of the sale would indicate that the term "reasonable," as applied to the interest rate on new capital has taken on a very different meaning than it had five years ago, and it does not indicate that it is safe to assume that the large capital requirements of the railroads can be met through the sale

of securities bearing interest at between six and seven per cent in competition with the sale of securities in this country by foreign governments and by our own industrial companies on a huge scale.

An Efficiency Engineer On Electrification

ELSEWHERE IN THIS ISSUE there is an article giving an efficiency engineer's views on the electrification of railroads. In this article the engineer makes some noteworthy comments on the subject of railroad economics, but also makes several statements which may well be questioned. Examples are cited in the following paragraphs in which the engineer's statements appear in quotation marks and the editor's comments follow:

"In our country electrification means an immense scrapping of existing equipment." This would, of course, be true if it were possible to electrify all of the roads in the United States over night, but all of the present electrically operated sections of steam railroads represent very small parts of the total mileage operated and electrifying most of these relatively small sections represents years of work. Long before it would be possible to electrify all of the steam roads, all existing steam equipment would be obsolete or worn out. Electrification, as applied to steam roads, is a matter of evolution, not revolution.

"Electric service has been successful in all respects except one—financial. The old horse-car lines made money; the electric lines are on the edge of bankruptcy." It would appear in this that the author has lost sight of the fact that the development of street railway equipment was so rapid that it was necessary in some cities to scrap horse-car and cable equipment for electric equipment, with the result that the electric lines are forced to pay their own carrying expenses along with the interest on the horse-car lines and cable lines which have ceased to exist. In addition, as expressed by Thomas A. Edison, the iron-clad contracts between the roads and cities made in the pioneering days, under normal conditions, have no protective clauses against the great change in operating costs brought on by the world war.

"Present railroad equipment works notoriously very few hours a day. Main tracks are occupied by moving trains about one per cent of the time; locomotives average less than three hours' working service a day, and cars are moving scarcely two hours a day." In using this argument, the engineer has, figuratively, set up a straw man and knocked it down. Electric operation is not advocated for sections of track which are occupied by moving trains only one per cent of the time.

"Electrification does not help the terminal situation; it aggravates it, since it tempts into the centers of cities terminals that, under steam conditions would have remained in cheaper suburbs." It is logical to suppose from this that the engineer would advocate bringing passengers and freight into the cities on already overcrowded streets from outlying railroad stations.

"As an economic or financial proposition, electrical operation is out of the question." One firm of consulting engineers, during the past two years decided that electrification was not advisable in more than half of the cases considered, but as a large number of capable operating men have concluded that electrification was the only solution of specific difficult problems, it would appear that the efficiency engineer's statements should be considered with reservations. Probably nothing has retarded the adoption of electric operation so much as the extravagant claims which manufacturers of electrical equipment have made in the past. It is quite possible to go as much to extremes in the other direction. If

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the subject of electrification is to be discussed in general, it is wrong to assume that electrification of all of the railroads in the United States is the subject of discussion. Electric operation has been adopted in few cases except where local conditions made it appear particularly necessary, and it is highly improbable that more than a small percentage of all the roads in the United States will be electrified for many years to come.

New Books

Storing. By H. B. Twyford, 200 pages, illustrated, 6 in. by 9 in., bound in cloth. Published by D. Van Nostrand Company, 25 Park Place, New York.

The necessity for storing stocks of materials of various kinds arises from the practical impossibility of obtaining a constant and uniform flow of materials from the raw state to the finished product at the point of consumption, and with the growing complexity of the modern industrial operations storage problems have also grown in complexity as well as in importance. In its broadest sense, the problem of modern storage not only involves questions of efficient methods of protecting and handling material, but many questions of a commercial nature must also receive consideration.

In this volume the author has attempted to consider the whole range of questions involved in the storage problem, both economic and technical. The former are dealt with in a general way only, defining the fundamentals, and pointing out some of the more common mistakes of an economic nature.

The technical problems are dealt with at greater length. Two chapters are devoted to the question of location, equipment and appliances for the storeroom, while the greater part of the work deals with storehouse operations, including discussions of clerical work, the storehouse organization and methods of accounting for and disposing of material received and delivered from the storeroom. Although, beyond the rather general discussion of the economic phases of storing, it has been the intention of the author to confine the discussion to the problems of the storekeeper rather than to include the related problems of purchasing, a brief discussion of the value of stores inventories has been included, as these materially affect proper cost accounting in connection with the work for which the material is delivered.

The book contains a large number of illustrations showing storehouse equipment and methods of handling material, as well as various forms required in properly listing and accounting for stores stock.

Official Proceedings of Sixth National Foreign Trade Convention, size 6 in. by 9 in., 650 pages, bound in cloth. Issued by the Secretary National Foreign Trade Council, 1 Hanover Square, New York.

The Official Proceedings of the Sixth National Foreign Trade Convention are now ready for distribution in book form.

Contained in the proceedings are all the speeches made at the convention, the discussions of important foreign trade problems, the reports made to the convention, and the list of delegates and firms. This volume, together with the reports of previous conventions, finds wide application as a textbook of foreign trade. The information contained in it furnishes a summary of the foreign trade thought of the country, and will be found highly suggestive to all practical foreign traders.

Letters to the Editor

The Noise Nuisance on Railroads

CHICAGO.

TO THE EDITOR:

The recent articles in your paper describing the introduction of telephone signals on the Pennsylvania Railroad to call in the flagmen causes the writer to wonder if we do profit by experience.

Whistles and other noises (some unnecessary) have cost the American railroads untold millions of dollars in law suits, often resulting in relocation of terminals, elevation of tracks, electrification, etc., to abate the noise nuisance.

What thought or attention has been given to a noiseless locomotive. The chief offenders are noisy exhausts. Why not muffle them? A noisy shrill whistle made of cast iron without musical tone, a harsh metallic clanging din called a bell and noisy open pop valves! For years efforts were made to secure a tuneful bell and whistle and to produce a muffled safety valve, and considerable success was attained, as indicated by the large number in service.

This progress was cast to the winds a few years ago by the introduction of so-called high lift or increased efficiency safety valves, that open with the roar of a 13-in. gun. Likewise the composition metal tuneful bell and chime whistle have had to give place to cast iron and pressed steel.

Evidently our daddies made a mistake in giving too much consideration to the sensitive ear and slumbering public, for the muffled safety valve has now gone into the discard and evidently was not considered a necessity on the United States Railroad Administration standard locomotives.

Do we forget or are we progressing?

A SUBSCRIBER.

Preventing Collisions Due to Angle Cocks

CHICAGO.

TO THE EDITOR:

I have read your editorial relative to the closed angle cock in connection with the recent serious accident near Dunkirk, N. Y., and it brings to my mind the many devices and designs that have been brought out during the last thirty years to avoid just such accidents as this.

I was air brake expert for a large railroad during eight years ending in 1900, and was so concerned over the many similar, though less disastrous, failures that I personally investigated all such inventions as gave promise of simplicity and effectiveness, and since that time have had only less active interest in the subject.

The Louisville & Nashville fully 25 years ago entirely abolished the angle cock on the locomotive, both to prevent its being closed at the wrong time, and also to keep the dirt and cinders out of the engine hose where they are blown back into the train line brake pipe. It adopted an air-tight dummy coupler and was still using this a few years ago and presume it is today. However, to the best of my knowledge, no other road or roads of considerable size followed its plan, as it occasions a slight loss of air and time in connecting and disconnecting the locomotive and train. The old American feeling of optimism, that "lightning doesn't strike twice in the same place," seems to prevent effective changes of this character unless and until such accident comes to your own road, and even then they are not lasting.

A number of years back, the railroad with which I have

been connected for nearly thirty years, abandoned the so-called "angle cock" on the rear of all passenger locomotives and substituted in its place a "straight-way" cock located about a foot or more under the back tender beam, so as to be reached only by a man on the ground and especially so located that a man riding "blind-baggage" could not accidentally push it closed with his foot. We also for a time drilled a $\frac{1}{4}$ in. hole in the side of all these rear tender cocks, which would vent the air from the hose-side of the cock rapidly enough to apply the brakes.

These ideas are simple, are not patented, and cause no delay or loss of air when the two adjacent cocks are closed nearly simultaneously and would, I believe, be well worth consideration as a "safety-first" proposition on all the railroads.

E. W. PRATT,
Assistant Superintendent Motive Power
and Car Department, C. & N. W.

The Motion Picture Machine As an Engineering Instrument

CHICAGO, ILL.

TO THE EDITOR:

There is every reason why the moving picture machine should become a scientific instrument for the use of the civil engineering profession. Its ramifications are untold and apparently unlimited. It is surprising that some of the scientific instrument makers have not seen its possibilities and produced a machine that would meet the requirements of this field.

If an instrument were built with leveling attachments for the horizontal plane and a telescope with cross-hairs, it would seem to be what would be needed. By means of the leveling device, pictures obtained would conform to diagrams and detailed drawings. The telescope with its cross-hairs would enable the operator to focus the machine carefully on the point and in the desired plane.

Such a machine would be particularly adaptable to railway engineering. With it the problem of the rail under load, that has been bothering investigators for some time, might be solved. The instrument could be set up so that the horizontal cross-hair is parallel with the top of the rail, when free from load and at a distance of ten feet from the rail so that the instrument would be prevented from receiving the vibrations from passing trains. A record of the cars and their weight would be shown in the pictures. A cross-hair immediately in front of the films and corresponding to the cross-hair in the telescope would show the actual point of the top of the rail before being loaded. As the train passed (speed to be predetermined and the reel turned to meet such a speed) the depression of the rail would be shown upon the films.

It might be possible that some calculations would be necessary but this could be determined by experiments.

Individual films of reels, so taken, could be selected from which graphs could be made. In this manner it seems possible that accurate knowledge of the action of the rail under load at varying speeds of trains could be obtained. It would also seem possible that movements of all the rails and parts of crossings could so be obtained. These films or sets of pictures, taken in conjunction with tests of the rail under transverse and alternating stresses and with a knowledge of the elastic limit and ultimate load of the steel of the rails undergoing investigation, would apparently give the investigators a rather comprehensive knowledge of the rail under load.

Investigators of rails under load have stated that the means so far employed have not been satisfactory for many reasons. It would seem, to the writer, that the instrument

or machine suggested, would be available for bridges, culverts, locomotive driving wheel counter balances and many other problems that are now perplexing railway engineers.

J. C. MARSH.

The Respectable Commission

BOSTON, MASS.

TO THE EDITOR:

The excellent editorial in the *Railway Age* of July 18 on the qualifications of the members of the Interstate Commerce Commission leaves off just about where it ought to begin. It is true that the majority of the commissioners are wedded for life to "the people"—that is, the majority of the voters; and as the majority of the voters do not yet know their own desires we must expect that the commission as a whole will remain flabby. Mr. Esch, for the same reason, has presented a flabby bill.

But with all its faults the Interstate Commerce Commission is the only body of men that anybody seems to be able to think of as competent to regulate our freight rates. The "average man" sets his hope on these commissioners because they are outwardly respectable, like a policeman, or a hotel clerk, or a Tammany alderman; while their disqualifications are not clearly defined—at least not to him. Railroad presidents recommend the commission as a rate-making power because they feel sure that Congress would certainly refuse to approve any action looking to the institution of a more intelligent or courageous body. So, therefore, it appears that we are destined—or doomed—to live with the Interstate Commerce Commission for better or for worse till death do us part.

What next? A number of competent writers have proposed that Congress direct the commissioners to regulate freight rates so as to permit the railroads to earn six per cent on their stock. This is good in principle; but how will the thing be done? They will spend so much time in trying to decide how low they can make the freight rates while still complying with the law that the railroads will die of apoplexy, or anaemia; delirium, or tuberculosis. To make the rates just right is impossible. It would be an endless problem on a single road, let alone the rest of our enormous railroad system. The commissioners would fear to make rates too high because of the sure displeasure of the shippers and the politicians. They would fear to make them too low, for it is by this time evident, even in Washington, that the railroad treasuries face bankruptcy; and even the politician knows something of the evils of insolvency. The only practicable plan is to make the rates *too high*, and provide for turning the surpluses over to the government. It is a difficult thing to make a law today, to provide for taxing a railroad equitably on its income which is to be earned one, two or three years hence; but it must be done, if we are to accomplish our threefold purpose of providing stable freight rates, reasonable railroad dividends and contented—or even half-way contented—voters. Let the railroads earn seven per cent. Possibly next year they will need $7\frac{1}{2}$ or 8 per cent. The federal government and the states will debate many months before deciding how to apportion among themselves the income taxes to be taken from the carriers; but they will have to settle the question in some way or other.

I do not trouble you with the problem of helping the weak roads, or with any discussion of the wage question; and you may say that I am not a thoroughgoing reformer; but is it not true that the freight rate question is fundamental? And that something must be done about it even if we shirk the duty of tackling these other puzzles?

NEW ENGLANDER.

Plumb's Soviet Plan of Railroad Management

A Discussion of the Scheme for Employees' Operation—Public Could Be "Exploited" Without Limit

PROBABLY no other subject has excited more interest in the United States recently than the "Plumb Plan" of having the public buy the railroads and turn them over entirely to their employees to run. The public has much difficulty in understanding just what this plan is and how it would work.

This is not surprising. The public's difficulty in understanding the plan is mainly due to the fact that it is absolutely novel in the history of industry and politics in America; and the public, like the individual, finds it hard to comprehend a thing entirely different from anything ever presented to its mind before. The same entire novelty which makes it difficult for the public to understand the plan renders it difficult for the public to visualize in detail just how the plan would work, and all the effects it would produce.

To say that the plan is absolutely novel is but another way of saying it is revolutionary; and the very fact that it is revolutionary should make the public scrutinize it long and carefully before seriously considering its adoption. Revolutions, whether in politics or industry, are not always undesirable. Sometimes they are necessary for the public good. But evolution is always preferable to revolution if needed changes can be brought about in that way. Evolution is accomplished by carefully taking one step at a time; and the man who does that usually knows where he is going and is tolerably sure not to break his neck. Revolution always is a leap in the dark, and the people who try to make progress by taking leaps in the dark, like the individual who tries to make progress that way, stands just as good a chance in doing so of breaking its neck as it does of getting where it wants to go.

The Russians recently have been taking a series of leaps in the dark similar to that the Plumb Plan proposes in their desire to make political and industrial progress. The result is that they are now living under a Government which avows that it is an "autocracy of the proletariat"; that practically all the people of real intelligence and ability have been killed or driven out of the country; that fully 95 per cent of their manufacturing and other industries are shut down, and that millions of the "proletariat" for whose supposed benefit the revolution has been accomplished and the present autocracy has been established have starved and frozen to death, while practically all the rest are hungry and half-naked.

Up to the present time Anglo-Saxon peoples have preferred to make progress by evolution rather than by revolution; and it is due to this fact that today they have the freest and most truly democratic governments, the most efficient and highly productive industries, and the best paid and most prosperous working people in the world.

Is the Plumb Plan Socialistic?

When the spokesmen of the labor brotherhoods were presenting their arguments for their plan before the House Committee on Interstate Commerce, some members of the committee raised the question whether their plan was not socialistic. Glenn E. Plumb, the author of the plan, and other spokesmen of the brotherhoods contended that it is not socialistic. Socialism, they pointed out, proposes not only the public ownership, but also the public *management* of all the facilities used in the production, distribution and exchange of commodities. The Plumb plan, on the other hand, proposes, like socialism, that the public shall acquire the railroads (and other industries), but, unlike socialism, that the

railroads shall not be managed by the public, but shall be turned over to a "tripartite" board to manage. This board would consist of five directors appointed by the President of the United States to represent the public, five elected by the "official employees"—that is, the officers—of the railways, and five elected by the "classified employees"—that is, by those now known simply as "employees." Manifestly, however, this would be management by the employees, since the "official employees" would, under this scheme, have no interest distinct from that of the "classified employees."

The difference between socialism and this plan is, then, very clear. Under socialism the railways and other industries would be owned by the public and managed by persons who would represent the public, and who, therefore, presumably would try to manage the industries in the interest of the public. They might not, and probably would not succeed in managing them for the best interests of the public, this being due to various reasons which are generally accepted in this country as conclusive arguments against socialism. But at least the managers would have some motives under socialism for trying to manage the industries in the interest of the public.

Under the "Plumb plan," on the other hand, while the public would *own* the railroads, they would be managed by a board of directors two-thirds of whose members would represent the employees; whose continuance in their positions would depend absolutely upon their success in satisfying the employees; and who, therefore, would be impelled by the strongest of motives to try to promote, not the interests of the public, but the interests of the employees at the expense of the public.

How completely control over the management of the railroads would be transferred, under this plan, to the employees, is not shown by mere reference to the so-called "tripartite" board which would be given general direction of management. The details of the plan are set forth in the Sims bill, which has been introduced in Congress; and it contains several important provisions which must be taken into account before the objects at which the brotherhoods really are aiming can be completely comprehended. Section 3 of this bill provides that the board of directors shall divide the railways of the country into districts. In each of these districts it shall constitute a "district railway council." It is important to note how these councils are to be chosen. One-third of their members are to be appointed by the "tripartite" board of directors; and as two-thirds of the members of this board will be employees, the board is pretty sure to appoint employees to the district councils. Another one-third of the members of the district councils will be elected by the "classified employees within their district," and the remaining one-third will be elected by the "official employees within said district." The result will be that *all* the members of the district councils will be employees. Now the board of directors may delegate to the district councils any powers it may choose to, "and the district railway council shall, upon such delegation, have and exercise within its district all of the powers and duties of the board of directors as may be delegated to it." Thus, the actual management of the roads in each district could be and probably would be delegated to the district council, and upon this council the public, although the owner of the railroads, would have no representation at all!

The labor leaders are fully justified in saying that this plan is not socialistic. It is even worse than socialistic. Hav-

ing provided that the public shall burden itself with a huge debt by buying the railroads, it provides that the public shall turn them over to the management of a particular class of the people for management under conditions which would enable this particular class to "exploit" the public without limit. The socialist is unselfish and modest in his demands, compared with the railway labor brotherhoods.

Power to "Exploit" the Public

That the railway employees would have the *power* to hold up the public without limit as long as this plan was in operation can hardly be denied. The plan provides that all salaries and wages shall be fixed by a central board of wages and working conditions, one-half of whose members shall be chosen by the "official employees" and one-half by the "classified employees." Its decisions are to be final, unless a majority decision cannot be reached, in which case there is to be appeal to the board of directors.

Now, there is nothing in human experience, and certainly nothing in recent experience in the railway field in the United States, to indicate that the time ever will come when any class of persons will be satisfied with its income, whether derived from wages or any other source. In the years 1916 and 1917 the railway employees of the United States received advances in wages amounting to \$350,000,000. In 1918 they received advances amounting to \$1,000,000,000 a year. And now they are asking for advances amounting to \$800,000,000 a year. Of course, they give what to them appear perfectly valid reasons why all these advances in their wages should be made. And they could convince themselves just as completely under the Plumb plan that their incomes ought to be still further and further increased as they can now. That is merely human. So we may be sure that under the "Plumb Plan" the "classified employees" would continue their perennial movements for higher incomes. And why should not the "official employees" want their incomes increased, too? And if they did, why should not the representatives of both classes on the central wage board agree to raise salaries and wages again and again until only the sky was the limit of railway wages and salaries? The central wage board, under the Sims bill, clearly would have legal *power* to fix \$10,000, or even \$50,000 a year as the minimum wage of a railway employee, if it was disposed to do so, and the public would have to pay it. If the railway salary and wage bill was not paid from earnings derived from freight and passenger rates, it would have to be paid from taxes, for the Sims bill expressly says (Article 2, section 5), that "all costs upon operation and charges upon the capital employed * * * shall be guaranteed by the Federal Government."

What Protection Would the Public Have?

There is no denying the fact that under this plan the "official employees" could, by acting in collusion, legally raise their salaries and wages without limit, and that, under the plan, the public would have to pay the bill. But, say the advocates of the plan, the "official employees" would have a strong incentive not to permit salaries and wages to be raised unduly. One of the features of the plan is that any surplus earned in excess of the amount required to pay operating expenses and interest on the bonds issued by the Government to buy the roads is to be divided equally between the public and the employees. The half of the surplus going to the employees is to be distributed among them in proportion to their salaries and wages, except that the "official employees" are to receive twice as much of it in proportion to their salaries as the "classified employees" are to receive in proportion to their wages.

Now, say the advocates of the Plumb plan, the "official employees" will necessarily refuse to consent to any unreasonable advances in wages and salaries, because the result would be to deprive them of part or all of their large "divi-

dends" from the surplus. And this is absolutely the only form of protection which, under the Sims Plumb Plan bill, the public would have from excessive advances in railway salaries and wages. Of what value would this protection be? In order to answer this question we must consider, first, what would be the position of railway officers under the Plumb plan, and second, what chance there would be of the railways earning a surplus.

Position of Railway Officers Under the Plumb Plan

Under private ownership and operation of railways the president of a railway represents the owners and operates the property for them, subject to government regulation. The other officers work under the direction of the president, and supervise the work of the employees. Under Government operation the officers occupy much the same position, except that they represent the Government instead of private corporations. Under the Plumb plan the officers would work under the general direction of a board, one-third of whose members represented themselves (the officers), one-third the employees and one-third the public. Suppose that the officers did not hold out against an unreasonable advance in salaries and wages. There would be appeal to the board of directors, and as one-third of the directors would be politicians and one-third representatives of the classified employees with their large voting power, there would be a strong chance that the politicians and labor men on the board would agree to make the advance in wages. Suppose, on the other hand, that the politicians sided with the officers against the advance. The result probably would be a strike by the employees, for it is a notable feature of the Plumb plan that although it practically provides for employees' management of the railroads, it does not in any way provide against the employees striking against their own management.

As a matter of fact, however, there would be little chance of the "official employees" ever holding out strongly against an attempt by the "classified employees" to raise salaries and wages. The officers would depend for their appointments and promotions upon, and have to work under, a board of directors and district councils on which the "classified employees" would be as largely represented as the officers. Therefore, no officer would long be able to hold his place, much less secure promotion, unless he was able to find favor in the eyes of the employees, and the surest way to lose their favor would be vigorously to oppose their wage demands. The officers who have been trained and developed under corporate management and who have been used to showing independence and fearlessly exercising authority over the employees would rapidly be weeded out, and soon the entire official personnel would consist of men who owed their positions, not to their ability and experience as railroad operatives, but to their success in the game of labor politics.

A member of the House Committee on Interstate Commerce asked one of the spokesmen of the brotherhoods the other day whether it was not a fact that practically all the leading railroad men of the country had risen from the ranks. The witness answered that it was, and that labor wanted this to be true in future, but that labor intended to have something to say in future about who should rise. This shows the way the brotherhood leaders' minds are working. Doubtless they intend to vault into the seats of the managers if they succeed in ousting the present incumbents; as they certainly will if the Plumb plan is adopted. Officers practically dependent for their jobs on the employees will not resist the demands of the employees for raises in their pay.

Furthermore, their prospective shares in the possible surplus would afford the officers no real incentive to oppose advances in wages, provided these were going to be accompanied by advances in their own salaries; and there would be no reason why they could not, by acting in collusion with the employees, get an increase in salary every time there was

an increase in wages. Now, there are very few men who would not take a raise in salary in preference to a chance to share in a surplus which might not, and probably would not, be earned.

Deficit or Surplus?

It is one of the curious features of the hearings on the Plumb plan at Washington, that the advocates of that plan have refused to recognize the fact that, under their scheme, a deficit might be incurred in the operation of the railways, and have talked glibly throughout about what would be done with the "surplus." The most cursory examination of the statistics showing the results of current railway operations is all that is necessary, however, to convince any rational person that, in the absence of a large advance in passenger and freight rates, there would not be the remotest chance of a surplus being earned under the Plumb plan.

Railway earnings are now running at the rate of about \$5,000,000,000 a year. Operating expenses are running at the rate of about \$4,500,000,000 a year. This leaves net earnings of only about \$500,000,000. The advocates of the Plumb plan claim the public could buy the railroads for \$12,000,000,000 in 4 per cent bonds. Even on this basis, however, the interest on the bonds would be almost \$500,000,000 a year, leaving no surplus worth talking about. But this is not all that must be considered. The employees are demanding that whether the Plumb plan is adopted or not, they shall be given new advances in wages amounting to \$800,000,000 a year. These advances in wages would make the operating expenses alone exceed the present total earnings; cause an operating deficit of \$300,000,000 a year—in other words, leave \$300,000,000 less than nothing with which to pay interest on the bonds issued by the public to buy the roads.

If we add this operating deficit of \$300,000,000 a year to the \$500,000,000 a year interest on railroad bonds, which the Government would have to issue to buy the roads even on the basis the advocates of the Plumb plan say it could, the employees, in the absence of an advance in freight and passenger rates, would start operating the railroads with a total deficit of \$800,000,000 a year. A fine chance they would have of ever earning a surplus to be divided between the employees and the public if they started with a deficit of \$800,000,000 a year!

As a matter of fact, the deficit with which they would begin operations unquestionably would be much larger than this. It is simply nonsense to talk about the Government being able to buy the railroads for \$12,000,000,000 in 4 per cent bonds. In order to buy them it would have to issue at least \$18,000,000,000 in 5 per cent bonds. This, then, would make the total interest the Government would have to pay on its railroad debt \$900,000,000 a year, and since the operating deficit would be \$300,000,000 a year the total deficit would be at least \$1,200,000,000 a year. The only way in which the employees' management could be given a chance to earn a surplus would be to make a very large advance in rates; and yet the advocates of the Plumb plan are contending that the adoption of their scheme would result in a reduction in rates.

It cannot be too often emphasized that while the advocates of the Plumb plan generously propose that in case, under the employees' management, a surplus should be earned, the employees would divide it with the public, they at the same time most ungenerously propose that if a deficit should be incurred under their management the public should pay it all. Their proposition to the public is: "Heads, we both win; tails, you do all the losing."

Effect of Plumb Plan Upon the States

There is still another point that should be considered in connection with the possible surplus or deficit. The railroads pay now about \$200,000,000 a year in taxes. Part of this goes to the Federal Government, but most of it goes to

the State governments. It constitutes one of the largest parts of the revenues of the States. Under the Plumb plan all the taxes now paid by the railroads, whether to the State or Federal governments, would be wiped out. The Sims bill expressly provides that all the earnings of the railroads shall be used for the payment of operating expenses, for the payment of interest on the bonds issued by the Government to buy them; for the creation of a sinking fund for the retirement of the bonds and for the creation of the "surplus" which is to be divided between the Federal Government and the employees. It even specifies what the Federal Government must do with the part of the surplus going into its treasury. The State governments doubtless will be especially interested in the parts of the plan which would at once deprive them of all power to tax railroad property or earnings.

This, however, is not all that the Plumb plan would do to the States. It would wipe out every vestige of State regulation of railroads. All the regulating of rates or operation is to be done by the Federal Government, for the Sims bill says that "the corporation shall be subject to the full regulatory powers of the Federal Government as expressed through the interstate commerce act," while nowhere does it provide for any regulation by the States. There is a provision in Section 4 that "when the board of directors delegates to any local authority or State or subdivision thereof * * * any of its powers under this section, it shall be lawful for such local authority or state or subdivision thereof to exercise any or all of the powers of the board of directors so delegated to it." In other words, the board of directors in respect to the operation of the railroads would be superior to the States themselves and they could exercise only such powers as the board might delegate to them. This, we believe, is the first case in the history of the United States where anybody ever had the impudence to suggest that the Federal Government should create a corporation which should not only be entirely above State regulation, but should be so far above it as to have authority to use the States as its agents.

Provision of "Working Capital"

One of the interesting features of the Sims bill is the care taken throughout to insure that the public shall furnish all the money that must be raised to enable the railroad employees to run the railroads. The public, of course, is to buy the railroads by an issue of bonds, the interest on which is to be guaranteed by the public and paid by it if the railroads fail to earn it. The roads are then, according to the terms of the bill, to be "leased" to a so-called "National Railways Operating Corporation," and, in the language of the bill, "The board of directors, official employees and classified employees hereinafter described shall be and constitute said corporation." Now, a corporation cannot do business, or even start business without some working capital—in other words, some ready money with which to meet current bills. It might be assumed that the "National Railways Operating Corporation" would at least furnish its own working capital. But this assumption would be incorrect. After having bought the railroads and turned them over to the employees the public must also furnish them the several hundred millions of dollars of working capital with which to do business; for the Sims bill says, "That the corporation shall be required to utilize said railway lines and properties and their equipment and the working capital which shall be put at its command in such manner," etc. If the working capital should be dissipated, the public would have no way of getting it back any more than it would have any way of recovering any losses that might be incurred through failure adequately to maintain the properties or through deficits. The proposition of the Plumb plan advocates is simply that the public shall furnish all the capital for the enterprise and take all the risks of loss; and if there are any profits—which the employees will have every opportunity and the strongest of in-

centives for preventing—the public will be given half of them.

That is, it will be given them in a purely Pickwickian sense. For, while the bill does not provide what the employees shall do with their half of the surplus, if there is one, it provides in detail what the public must do with its half of the surplus, if there is one. The public's part of the fund is required to be used "(1) to pay for extensions and betterments * * * before capital funds shall become available therefor, and (2) accumulations thereof in excess of \$500,000,000 shall be automatically transferred to sinking fund." The sinking fund would be used to pay off the bonded debt. The reduction of the bonded debt would increase the surplus if there was one. And the employees would get one-half of the resulting increase in the surplus!

An Attack Upon Present System of Industry

There should be no mistaking the significance of the propaganda for the Plumb plan in its relation to private property in general. Questions which were asked and the answers which were made to them while witnesses supporting the Plumb plan were testifying before the House Committee on Interstate Commerce made clear that the Plumb plan for employees' management of the railroads is practically a reproduction of the Soviet plan of government and industry which was first adopted in Russia under the Bolshevik regime.

It is primarily an attack upon profits with the object of preventing industries of all kinds from earning profits in future in order to enable the workers to get in one form or another the earnings of industry which otherwise in the form of profits would go to the capitalists. It is therefore necessarily an attack upon all forms of private property, whether property in railroads, manufacturing plants, or farms. Under the present system of industry in America all property is managed for the purpose of making profits. If the opportunity to make profits is destroyed then the value of the property to the owner is destroyed. In England those who are advocating the nationalization of the railroads and the coal mines and their transfer to the employees for management are also advocating the nationalization of all farm land and its transfer to the farm laborers for management. The logical extension of the Plumb Soviet Plan to other industries themselves would result in the Government buying all the farms in the country and turning them over to the farm hands to run in their own interest. The advocates of the Plumb plan claim that some farmers are supporting it. No farm owner will support it who realizes that its logical extension would mean the nationalization not only of the railroads, the steel industry and the packing industry, but also the farming industry.

Do Railroad Employees Really Back This Plan?

The advocates of the Plumb plan claim that it has the backing of practically all the organized railway employees of the United States. The skilled employees of the railways always have been regarded as an unusually intelligent class of working men. Mr. Plumb's attempt to transplant the Russian Soviet plan to America is so grotesque and at the same time so revolutionary that it is hard to believe his scheme can possibly have the backing of as many railroad employees as he claims. If it has, this must be due to the fact that many of them do not understand what the plan really is. As a matter of fact, no complete referendum of the organized railroad employees has ever been taken on the Plumb plan, and there is reason to believe that if a referendum were taken under conditions which gave the men an opportunity to express their true views a very large part of them would go on record against the Plumb plan.

When the advocates of the Plumb plan began presenting it to the House Committee on Interstate Commerce they took

a very truculent tone. They said, in effect, that the brotherhoods did not intend to permit the railroads to be returned to private management, and that they would adopt whatever measures were necessary to secure adoption of the plan of employees' management. The members of the House Committee, the press and the public at once assumed—and no doubt correctly—that what the brotherhoods' spokesmen meant was that they would go the length of calling a nationwide railroad strike in order to force adoption of the Plumb plan, if they could not get it adopted in any other way.

Will the Brotherhoods Strike for the Plumb Plan?

Doubtless to the great surprise of the brotherhood leaders, Congress and the public did not betray the slightest symptom of becoming scared. On the contrary, there was an outburst of public sentiment against the brotherhoods. Denunciations of their leaders' attitude were published in newspapers throughout the country, and delivered by members of the house committee and other members of Congress.

Since then the brotherhood leaders apparently have been taking the back track. They have been denying that they intend to call a strike to force the Plumb plan upon the country.

The nation should not let itself be lulled into a sense of security by the tone the brotherhood leaders are now taking. In 1916, when it was repeatedly charged that they intended to call a nation-wide strike if their demands were not granted without arbitration, they as repeatedly declared that there would be no strike. *They said then, as they say now, that they expected to win without a strike.* But when the railway presidents absolutely and finally refused to grant their demands without arbitration, the heads of the brotherhoods did issue the order for a strike; and they refused to recall the order until Congress, under whip and spur, with the brotherhood leaders holding a stop-watch on it, had passed the Adamson basic eight-hour day law.

The brotherhood leaders now say that they expect to secure adoption of the Plumb plan without a strike. But it is perfectly apparent that they are engaged now in stirring up all the labor troubles on the railroads they can, with the purpose not merely of getting higher wages, but also of making it as difficult as possible to return the railroads to private operation. Should they succeed in preventing a return to private operation, they would regard this as the first great victory in the campaign for the Plumb plan. They would then go on with their propaganda for it with redoubled energy; and if they finally found that propaganda alone was not sufficient, there can be no serious question in the mind of any person familiar with their past history that they would call a strike if they had the slightest hope that they could thereby "put over" the Plumb plan. The present leaders of the brotherhoods have supreme confidence in their ability to get anything they want by means of strikes and threats of strikes; and as long as they have this confidence, and it continues to be perfectly lawful for them to call strikes at any time they want to, and upon any pretext that appeals to them, the country will continue to have hanging over it the menace of great railroad strikes. Because of this supreme confidence of the brotherhood leaders in the omnipotence of the strike, it now appears almost certain that sooner or later a general railroad strike will occur in the United States no matter what system of management the railroads have, and since it appears almost certain that such a strike will come, probably the best thing for the country would be to have it soon and get it over. If it must have it sooner or later, as now appears almost certain, probably we had just as well have it for the purpose of "putting over" the Plumb plan as for any other purpose.

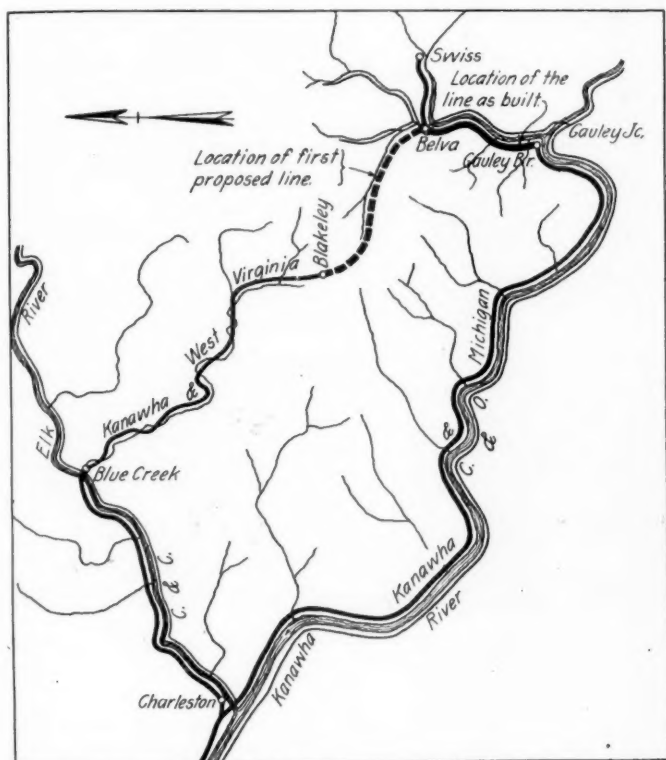
Thrift is a shield against money worries. Buy War Savings Stamps.

The Kanawha & West Virginia Builds a New Line

Its Construction Involved Exceptionally Heavy Grading.

Rock of Varying Formations Encountered

IN SEPTEMBER, 1916, the Kanawha & Michigan Railway acquired the Kanawha & West Virginia Railroad, consisting of 34 miles of line running from Charleston along Elk river and Blue creek in Kanawha county, W. Va., to Blakeley and four miles of line on the Gauley river in Nicholas county, W. Va., between Belva and Swiss. The



Relation of the Gauley & Eastern to the Kanawha & Michigan and the Kanawha & West Virginia

Kanawha & West Virginia also had various other surveys and rights-of-way in the Kanawha coal district of West Virginia. It was the original intention of the Kanawha & West Virginia to build a line along the Gauley river between Belva and Blakeley, connecting its existing lines, as shown on the map. To do this would have required the construction of 11 miles of line through very rough country with a tunnel 950 ft. long and three miles of 1.8 per cent grade, uncompensated, ascending to the tunnel on each side, with several 10-deg. curves on these grades.

To avoid building this line, expensive in construction, operation and maintenance, it was decided to construct the Gauley & Eastern Railway along the west bank of Gauley river, from Gauley Bridge, the southern terminus of the Kanawha & Michigan in Fayette county, W. Va., to Belva, a distance of 5.6 miles. The Gauley river along this line is about 650 ft. above sea level and the tops of the mountains are about 1,100 ft. above the river. The railroad grade is from 20 to 30 ft. above low water and is practically out of reach of high water. The line and grade on this work conforms to the standards of the Kanawha & Michigan and the Kanawha & West Virginia which it connects. It opens new coal fields and timber lands in this section, the coal consisting of the Eagle, No. 2 gas and Coalburg seams, Kanawha measures.

This line has a grade of 0.3 per cent, compensated against

loaded traffic and 0.5 per cent compensated against empty movement. The ruling grade against northbound or loaded movement is 5,242 ft. long and that against southbound or empty movement 3,800 ft. long. The maximum curvature is 6 deg. and there is only one curve that sharp. The total length of line on curves is 14,897 ft. with a total central angle of 410 deg. There are three timber trestles on the line, 30 ft., 120 ft., and 105 ft. long, respectively, with an average height of about 20 ft. There is also an under crossing with the Gauley branch of the Chesapeake & Ohio at Belva. These bridges were built of timber as it was impossible to secure steel for them because of the war. Two concrete pipe culverts of 5-ft. and 4-ft. diameter were placed under the railroad and an adjacent county road. Numerous smaller culverts of cast iron pipe 12 in. to 24 in. in diameter were also installed.

The most complicated problems in the construction of the line were experienced in the grading. Because of the cliffs it was impossible, in some places, to get a loading track ahead of the shovel without great expense. In a few of these places, it became necessary to make a cast-over cut, using a short jack-arm on the shovel and then cutting the shovel back and load-



A Shovel Making a Cast-Over Cut

ing the full cut for use on the various banks. The blasting down of the cliffs formed an interesting part of the work. At one point between stations 41 and 46, shown in one of the photographs, the entire face of the cliff was blown down at one time. This shot consisted of 17 holes about 60 ft. deep and 9,000 lb. of 40 per cent dynamite was used. The shooting was so planned that practically no rock was thrown in the river except that which it was desired to place there. Some waste occurred where the cast-over cuts had to be made first, but not in appreciable quantities.

The grading of this new line involved some exceptionally heavy and difficult work. About three miles of the line is located close to the river bank, where it was necessary to shoot down and remove cliffs ranging from 60 to 100 ft. above grade. Great difficulty was experienced in shooting this material as a variety of formations were found, including soft and brittle shale and exceedingly hard sandstone, this condition leading to considerable overbreakage. It was also found

necessary to vary the quantity of explosives in the shots to get good results.

A much-traveled county road parallels the river on this location and $3\frac{1}{2}$ miles of this road had to be abandoned and reconstructed on the same grade with the railroad. Construction was delayed to some extent by two floods occurring in the river and damaging the new banks at points where they had not yet been protected with rock and riprap.

At several points trouble was experienced from slides. In some cases the dirt and small rock came off the top of the

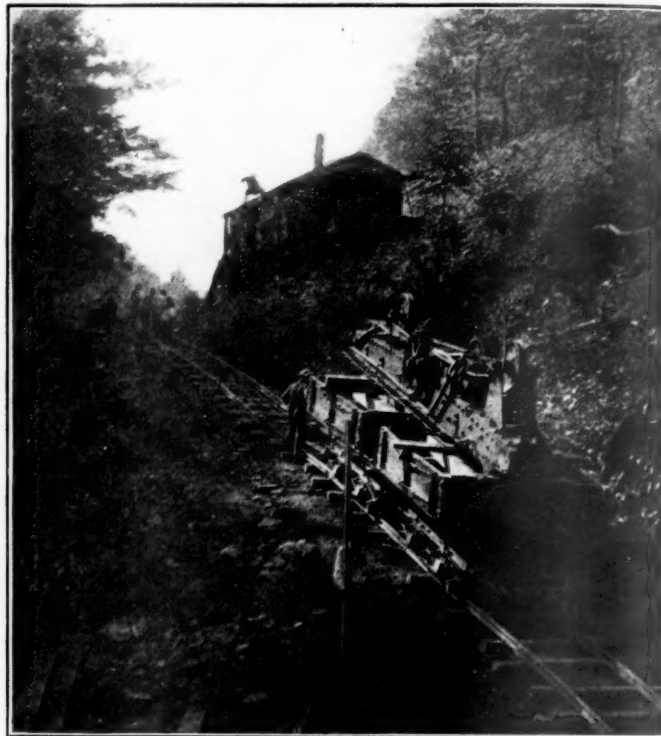
of the slope through the formation to rock about 20 ft. below grade and these were shot, as finished, the idea being to permit the water to escape through the strata underneath. These holes were 120 ft. to 130 ft. deep, about 75 ft. apart and 190 ft. from the center line and have apparently given relief.

An interesting feature of the job was the installing of the contractors, equipment at the Belva end of the job. This



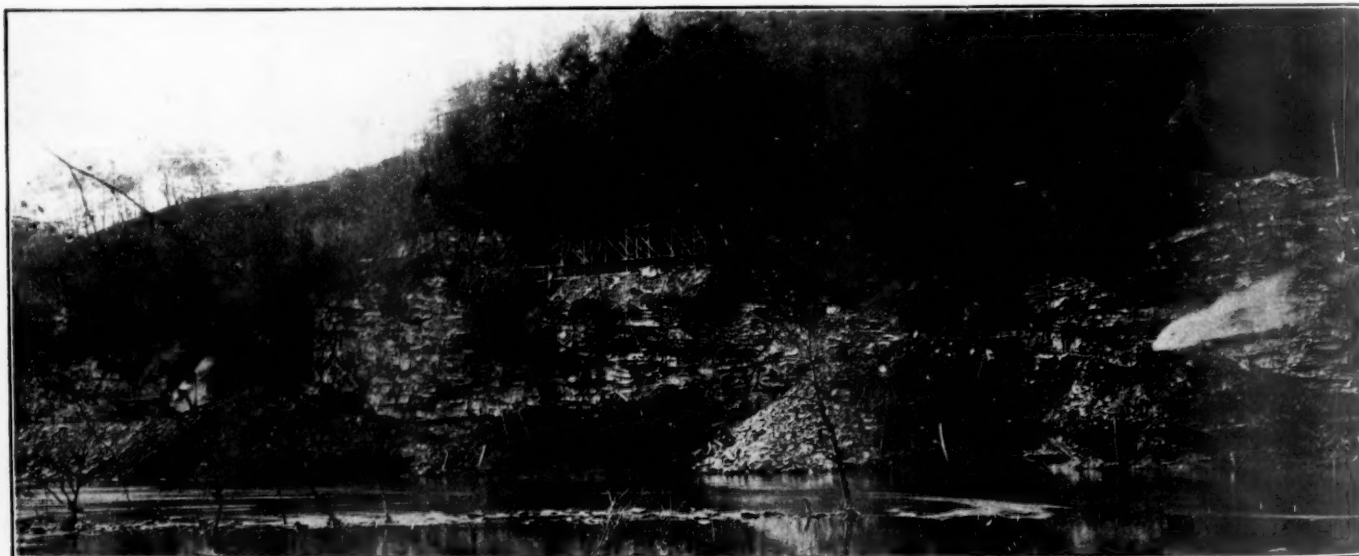
Looking Up the River from Station 33

cliffs. In one instance, at the upper end of the line at Belva, there was a cut with a maximum depth of about 40 ft. on the upper slope line which consisted of a soft yellow clay, very porous, with about 30 per cent of boulders and loose rock in it overlying a stratum of hard blue clay, impervious to water. The top of the blue clay was 6 to 10 ft. above grade and the water penetrating through the top formation to the blue clay, caused the top to break and slide off in large quantities with the result that three times the estimated yardage was moved



Moving Narrow Gauge Equipment Up a 20-Per Cent Grade at Belva

equipment consisted of a standard gage grading shovel and three dinkey engines, with cars and spreader of 3 ft. gage. The shovel was taken about 1,000 ft. through a corn field, then down through Twenty-Mile creek and up a 20 per cent grade



Drilling from a Trestle in Preparation for a Big Shot Between Stations 41 and 46. This Entire Cliff Was Shot Down at One Time

from this slide. After the removal of this material it was found that a break had occurred about 500 ft. up the mountain side and the entire section seemed to be moving toward the track. Holes were drilled about 75 ft. back from the top

about 200 ft. long to the county road at the point where it was to be cut in. The engines and cars were then brought over and pulled up the grade by the shovel, using a block and tackle attached to trees.

The Gauley river furnished an excellent water supply for boilers during construction and coal was secured in the immediate vicinity. The drilling was done on the cliffs and through all the heavy work with 4-in. Cyclone gasoline drills and on the smaller cuts with tripod steam drills. All the steam shovels on the job were equipped with air pumps and furnished air for the drilling necessary in large rocks and slabs in front of shovel which it was necessary to break with explosives before they could be handled by the shovel. Approximately 132,000 lb. of dynamite and a small quantity of black powder were used in the job.

Considerable difficulty was experienced by both the contractors and the railway company during the latter part of 1917 and during 1918 in securing sufficient labor and material to carry on the work properly. The fact that a large number of coal mines, all running to capacity, are located in the immediate vicinity made the labor problem especially acute at times. The line promises, however, to be capable of operation with normal maintenance expense as most of the slides have been stopped and the fills are very solid and not likely to wash.

The grading and bridge work was started about September 1, 1917, and the line was completed in June, 1919. The grading work was done by J. B. Lindsey, of Middleport, Ohio, and C. W. Marshall, of Kansas City, Mo., and some of the county road work was done by A. Keathly, of Huntington, W. Va. A total of 357,282 cu. yd. of excavation was moved, about 80 per cent being rock, at a cost of \$1.05 per yd., not classified. The track was laid with 8-ft. and 8½-ft. white oak ties and 90-lb. A. S. C. E. relay rail which had been re-sawed at the Kanawha & Michigan plant at Hobson, Ohio. The track was ballasted with pit-run gravel and some slag and cinders.

We are indebted to C. M. McVay, division engineer, of the Kanawha & Michigan, at Charleston, W. Va., for the information given above.

An Efficiency Engineer's Views on the Electrification of Railways

THE FOLLOWING is taken from a written discussion by Harrington Emerson on the paper by W. B. Potter and S. T. Dodd, presented before the Western Railway Club, and abstracted in the *Railway Age* of May 9, 1919, page 1157:

"In the March, 1907, number of the *Railway Age* I wrote a paper whose title was: 'The Steam Locomotive More Economical Than Electric Equipment for Standard Railroad Operation.' My paper was called out by the interesting, suggestive and brilliant joint study by Majors Lewis B. Stillwell and Henry St. Clair Putnam as to the economies to be effected by the substitution of electric for steam operation.

"Twelve years have passed. I see no reason to modify convictions then expressed. Here and there under special conditions electric traction has been installed in subways, for street car service, for interurban service and here and there on mountain divisions. Electric service has been successful in all respects except one; financial. The old horse car lines made money, the electric lines are on the edge of bankruptcy.

"What are the principles underlying costs of railroad operation? Just 20 years ago James J. Hill said to me that I could write the formula for successful railroad operation on my thumb nail. He said: 'Receipts are by the ton and passenger mile, expenses are by the train mile.' He gave me 20 years to better the formula. I was continuously in railroad work for the next 20 years and continuously I tested his formula and ultimately found it wanting.

"Steam railroad receipts are indeed largely by the ton mile and the passenger mile, but expenses are not by the train mile.

"Expenses are: (1) The terminal cost of collecting and starting the traffic. (2) The terminal cost of delivery and distributing the traffic. (3) The train mile hour cost.

"An investigation made about 15 years ago showed that the value of the terminals of the Lake Shore in Chicago alone nearly equalled all the other investment in track and equipment. The enormous cost of New York terminal facilities is well known. Mr. Fisher 12 years ago demonstrated that terminal expenses increased by the square of the population, and that on this account all our roads serving great cities were financially doomed. Subways and urban trolleys do not have terminal expenses. They usually occupy free of charge the most costly sites in the world. Electrification does not help the terminal situation, it aggravates it, since it tempts into the centers of cities terminals that under steam conditions would have remained in cheaper suburbs.

"But it is the third division of expense that is more largely responsible for steam railroad collapse and that stands in the way of electrification. Expenses are not by the 'train mile, they are by the train mile hour.'

"All railroad expenses fall into one of the three groups of materials, salaries, investment maintenance. In 1914 per average locomotive day these expenses were:

For Materials	\$ 33.00
For Personnel	55.00
For Investment	77.00
Total	\$165.00

"The investment charges amount to 10 per cent on the valuation and this without adequate provision for obsolescence and unremunerative betterments. The seven capital charges are: (1) Taxes. (2) Insurance. (3) Rentals. (4) Obsolescence. (5) Unremunerative Betterments. (6) Interest. (7) Dividends. Personnel is almost wholly an hourly charge. Materials even are partly an hourly charge, both in storehouse and in use. Investment maintenance charges are wholly by the hour.

"Present railroad equipment works notoriously very few hours a day. Main tracks are occupied by moving trains about one per cent of the time, locomotives average less than three hours working service a day, cars are moving scarcely two hours a day. Pipe lines have a double advantage over railroads. They are occupied continuously by moving loads and the container does not move, there is no dead weight.

"Fifteen years ago some of my clients wanted to build a standard gage road in Alaska. I proved to them that a two foot gage could carry annually 20 times as much freight as their enterprise could provide. No wonder some of the cheaply built narrow gage roads in Alaska paid in three months their total cost of constructions as well as of operation. Charges per hour were low.

"Electrification will heavily increase investment maintenance charges, not lessen them. This is the fatal objection to electrification. It is doubtful whether in a new country, on a new enterprise, let us say the Cape to Cairo project in Africa, electric operation would not require a heavier investment per mile than steam, thus offsetting any other highly problematical savings. In our country electrification means an immense scrapping of existing equipment and an immense capital investment in new equipment. As an economical or financial proposition electrical operation is out of the question.

"It is a great pity that our two government directors-general of the Railroad Administration, as well as the Interstate Commerce Commission, have failed to realize the necessity of separate terminal charges or the effect of the hour on operating costs.

"We cannot today on the railroads reduce the gage of

our tracks or substitute little rapidly moving cars for big ones, and make them deliver twice as many ton miles per hour but the motor trucks are for short distances doing this very thing. Their terminal accommodations cost less and are greater, they work more hours each day.

"We can at least avoid giving the coup de grace to our railroads already staggering under the wound of government operation, by carefully avoiding a still further increase in the hourly investment cost which is already between 40 and 50 per cent of the total hourly cost. Under the best operations of steam and of electric roads what economies are there in materials and in labor to offset the increased hour charge due to larger investment for the same service?"

Plumb Calls Conference on Railroad Control

A CONFERENCE of "leaders of national thought," invited by Glenn E. Plumb, counsel for the organized railway employees, to discuss the railroad problem with the labor leaders at Washington, met on August 9 and adjourned on August 11, leaving its activities in the hands of an executive committee. Three sub-committees, to be composed of "experts of national reputation in their several fields," are in process of formation, to study the engineering or technical, the legal, and the economic aspects of the railroad situation in America. These committees are to report to a general conference to be held in Washington on October 6. According to the official press notice:

"While this conference of liberal thought was called before the mind of President Wilson became known on the question of a constructive policy to be pursued toward the present acute state of industrial unrest throughout the country, it falls naturally into line with his desires as since expressed, and is in this sense an interesting example of America's quickness in action.

"While no definite action toward that end was taken, the question of conferring with President Wilson, in the spirit of this statement, was discussed. It is unavoidable that a meeting with the President will be sought at an early date, when the essential principles of the Plumb plan will be presented and the state of facts outlined which lends such power to the proposals of the brotherhoods for the nationalization of the railroads."

Judge Walter Clark, chief justice of the Supreme Court of North Carolina, was elected temporary chairman. Among those who attended the preliminary conference were Gov. Henry J. Allen, of Kansas; Prof. Edward Bemis, of New York; Ex-Gov. E. F. Dunne, of Chicago; Frederick C. Howe, Commissioner of Immigration of the port of New York; Frank P. Walsh, formerly joint chairman of the National War Labor Board; J. A. H. Hopkins, chairman of the executive committee of the committee of 48, and Morris L. Cook, consulting engineer, of Philadelphia. This group met with A. B. Garretson, adviser of the Order of Railway Conductors; James J. Forrester, grand president, Brotherhood of Railway and Steamship Clerks, Freight Handlers, Express and Station Employees, and other officials of the railroad labor organizations now assembled in Washington.

The first session of the conference was devoted to a presentation of the theory of the brotherhoods' railroad plan by Glenn E. Plumb.

The conference apparently restrained any impatience it may have felt to endorse the Plumb plan at its first session, but on Sunday Chairman Clark issued a statement, saying in part:

"As a result of our deliberation upon the existing railroad situation and the various suggestions for dealing therewith, the conference declares that the following principles should

control the action of the government with respect to this most important question:

"The government has resting upon it the duty and obligation to conserve and further the interest of the people as a body, particularly with respect to the conditions of their livelihood. Distribution of the products of the nation's industry and agriculture is, therefore, not only a proper but an imperative function of the government which the people have a right to insist shall be properly fulfilled. It is therefore incumbent upon the government to provide transportation (as the principal factor in distribution) at actual cost, thus insuring means whereby the products of one region may, with only the addition of actual cost of transportation, be brought to the consumers in another territory. Any plan proposed for the solution of the railroad problem must, therefore, meet the test that it will provide transportation at actual cost.

"The existing state of industrial warfare is more costly to the consuming public than to the workers or to the owners of capital. Any plan for the solution of the railroad problem which seeks the endorsement of the public should provide for a share by the workers in the management and in the profits arising from increased efficiency. We therefore welcome any well-considered movement toward democratization of the railroads as being in the interest not only of the workers but even more in the interest of the public.

"Several plans have been presented to the Congress of the United States for the future ownership and operation of the railroads. Some of these plans have been presented by the representatives of railroad security owners and other property-owning groups. One plan has been presented by the representatives of the railroad employees. These plans must be tested and analyzed in the light of the principles already enunciated. In order that this may be done in the orderly manner which befits a question of such transcendent importance to the American people, we have determined to call a national conference to meet in Washington on Monday, October 6, 1919, and we have further decided to appoint special committees to analyze the several proposals which have been offered for the solution of the railroad problem, to report their findings at that national conference."

This was followed by another statement by Edward Keating, manager of the Plumb Plan League, in which he said: "All that the railway brotherhoods asked was a fair and exhaustive examination of the railroad situation in America, and a full consideration by the country of the proposals which they advance for dealing with this situation. If the true facts of the case can be spread before the country, the brotherhoods rely on the soundness of the principles embodied in their plan to win the support of public opinion."

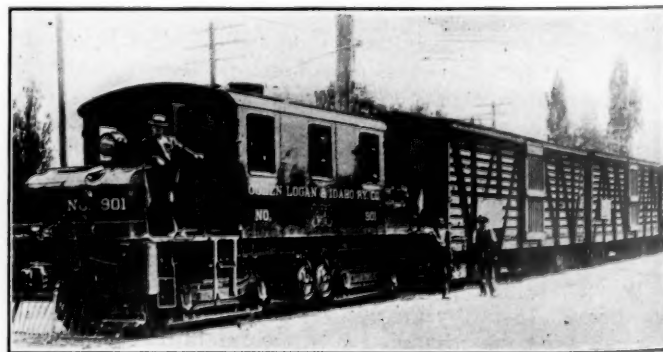


Photo from Underwood & Underwood, N. Y.

Hauling Freight on Electric Railways

An electric sheep train on the Ogden, Logan & Idaho. The big sheep raisers use trains of this kind for shipping their animals to market, and for shipping flocks from one grazing region to another.

Possibilities for Supply Manufacturers Abroad

Local Industries in Europe Will Have Difficulty in Meeting Demands for Railway Material

By Robert E. Thayer,
European Editor of the *Railway Age*

LONDON, July 25, 1919.

THE SITUATION IN ENGLAND, France and Belgium regarding the sale of American railway supplies is somewhat complicated. In all of these three countries, the governments have at the present time, a lot to say as to where the purchases of railway materials shall be placed. Naturally it is their desire to place orders with the home industries, not only to give them ample business and thus provide employment for their own countrymen, but also on account of the fact that they want to keep the money in their own countries. In some cases orders have been placed with the home industries even though both the deliveries and prices of American companies have really been more attractive.

It may be stated generally that American industries can only hope for business from these countries when, first, the local industries have been amply provided with orders and cannot fill additional orders in the time desired, and when there are no local industries to provide the desired material. The credit facilities also enter very largely into the situation.

There is a vast amount of railroad work to be done in all of these countries in order to rehabilitate the railways and to reconstruct their devastated portions. American manufacturers who have gone to Europe since the war expecting to receive large orders have been quite disappointed in not being able to do a larger amount of business, but the reason that they have not done more business is that these countries have not really been able to adequately determine the amount of business that can be done by their own industries. In other words the market was not ripe. There is but little question, however, that as time goes on these countries will be obliged to go to America for railway material which they must have, and which they are not sufficiently well equipped industrially to supply. The local industries will have more than they can do to provide material for their own countries soon enough to rehabilitate the railways as promptly as they should. In fact it is believed that business will be handed to American industries on a "silver platter," due to the fact that European countries will not be able to supply all of their own immediate needs.

The labor situation in England and France particularly is in a decidedly unrestful state. The reaction of the four long years of war has by no means spent itself. Labor has become extremely independent, and to a large extent has got beyond the control of the labor leaders. Out of work gratuities, particularly to the demobilized men, has had a serious effect, and it has been difficult to get the men back into their peace-time pursuits. The attitude of labor in England in the mining industry is having untold serious effect on the industry of that country. Some of the miners have bolted from their leaders and have struck in protest of the action of the Government regarding the mines, and at the present time the consequences of their action appear to be very serious. With the cost of coal increasing six shillings per ton or about \$1.50, and with the decreased output on account of a seven hour day, the English industries will find it more difficult to compete with American prices. The miners and labor in general are trying to force the government into the general nationalization of the national resources and public utilities, and the movement is so strong that the government at the present time has hesi-

tated to take any direct stand in the matter. It undoubtedly realizes the disastrous effect of general nationalization, but at the same time hesitates to take a positive stand against it for fear of the consequences that may follow. Public opinion does not seem to have the same effect upon the laboring classes in England that it has had in the States.

Situation in Belgium

It is difficult to enumerate the kinds of material which these countries will be obliged to purchase from outside sources. Belgium of course is in bad shape and will need practically everything in the railway line. At the present time it needs rails and structural steel. It was only about a month ago that its blast furnaces resumed operation. It needs rolling stock, shop equipment and signals. The rolling stock is in a deplorable state, and had it not been for the German cars and locomotives obtained from Germany on the signing of the Armistice, Belgium's railways would have had extreme difficulty in maintaining proper train service. It is the desire of the Belgian State Railways to return these German cars and locomotives and buy new, and under the terms of Peace they are given the opportunity of either accepting the German equipment, deducting its value from the amount of indemnity due Belgium, or else returning the German equipment and buying new with cash derived from the indemnity. It has not been decided yet what will be done, but the policy followed will undoubtedly be, provided proper credits can be established until the indemnity is paid, to buy new equipment. It has been stated that if this is not done, it will take the Belgian railways 30 years to get their power and rolling stock back to its pre-war condition. If the Belgian railways decide to return the German equipment and take the money for new equipment, an extensive standardization program will be formulated. This would be of great advantage to American industries, for a large amount of equipment will be required and better prices can be made and better deliveries ensured.

A vast amount of work will have to be done on the signal system of the Belgian railways. Plans are now being formulated for a system which is reported to be a combination of English and American practices and which will be simpler than that previously used in that country. There are rumors that automatic signaling is being considered, but no direct information has been obtainable, nor is it believed that any definite decision has been made in this matter. The work of reconstruction of the signal system will take about two years, and while every attempt is being made to place business with Belgian industries, it is believed that the demand for this equipment will be so great that it will be impossible for them to supply the necessary equipment.

The shop equipment of the Belgian railways is in a deplorable state. It is such that, at the present time, the shops are working from one-third to one-half their pre-war capacity. This has necessitated contracting locomotive repairs to Belgian locomotive builders, which at the same time will retard the output of new locomotives from these companies.

Regardless of the fact that Belgian railway shops need large quantities of machine tools, the situation as it stands today does not present a very encouraging outlook for Ameri-

can machine tool builders. The American government has arranged with the Belgian government through a Belgian combine for the sale of the surplus machine tools purchased for war purposes. The prices are to be those of 1914 with an increase of about 55 per cent., delivered at Belgian ports, and a credit for three years has been established to facilitate the Belgian finances. With the quantities of tools thus made available to Belgium at such advantageous prices, American manufacturers can only hope to obtain orders for special types of machines required in railway shops, and then only those which cannot be provided by the local Belgian companies.

Situation in France

The requirements of France, while not relatively as serious as those of Belgium, are believed to be so vast that it will be impossible for the French manufacturers to meet the demands of reconstruction in the devastated areas, the rehabilitation of all railways in general, and new work in the added territory of Alsace-Lorraine. It has been estimated that an expenditure of \$971,000,000 will be required to finance this work. As in Belgium, the railways in the devastated areas, namely the Nord and the Est, have had to rely on German equipment to meet their needs, and this will be undoubtedly returned if proper financial arrangements can be made for the purchase of new equipment. The locomotives and cars brought over by the American Expeditionary Forces have also assisted greatly in relieving the equipment situation. These will stay in France, but with it all, there appears to still be a great demand for new equipment. Standardization programmes are being developed, which have been mentioned previously in these columns, and a large number of locomotives have been ordered to existing designs to meet the more immediate needs, but with the labor situation as it is today in France, there is a grave question as to whether the expectations of the companies delivering this new equipment in the time required will be met.

There is a large amount of work to be done in rehabilitating lines and shops. The opportunities for American manufacturers will depend upon the capacity of the French industries to supply these needs, and further upon the service the Americans give in comparison to that which can be obtained from other outside countries. During the war French railway men had a great opportunity of learning more about American railway practices, and while it seems to be the opinion of most of the railway men who served with our forces in France that but little of American practices will be absorbed by the French railways, there have been indications that this is not strictly the case. The Paris-Lyon-Mediterranean was much impressed by the telephone despatching system used by the American forces in France and is to instal that system on its lines between Dijon and Lyons. Furthermore, that road is becoming much interested in automatic signals, and it is believed that a trial will be made of them to determine their value to French railways. The engineers of that road are now making a careful study of this problem.

The locomotive design of France is approaching more and more American lines. The compound locomotive is giving place to the high degree superheater simple type of locomotive. The standard locomotives which are being designed will be simple engines. The conditions have so changed in France, particularly as regards labor, that more of the labor-saving methods which are common in America will find favor there.

The machine tool situation is somewhat the same as in Belgium. Arrangements have been made with the American government for the sale of the machine tools brought into France for the use of the American military forces, at very favorable prices, which have been reported as being 1917 prices less 25 per cent. Here again, the American machine

tool manufacturers will find little encouragement, but it is understood that regardless of this arrangement, many inquiries are being received for special types of American machine tools.

Freight cars of larger capacity than have generally been used in France are coming into greater favor and undoubtedly with the increased cost of labor, greater efforts will be made to secure better train loads than have been the practice in the past. The use of the continuously braked freight train is being considered, and also the automatic coupler, but the latter presents considerable difficulties due to the interchangeability with the present type of coupling.

Situation in England

The situation in England is chiefly a matter of rehabilitation. During the war maintenance has been sadly neglected. Very little has been done pending the action of the government on the Transport Bill. There is a great need for equipment of all kinds, both track and rolling stock. New locomotives are required, and it is believed that cars of greater tonnage will be built. Sir Eric Geddes, Minister designate of railways, in speaking before the House of Lords on the Transport Bill, spoke of the advantages to be obtained with freight cars of greater capacity than are generally used in England, stating that locomotives can be loaded to greater capacity without increasing the length of trains which are now limited by the length of sidings. He called attention to the fact that about half the freight cars in England, or approximately 700,000, were privately owned, of which 500,000 were under 12 tons capacity. It is believed that English railways can use freight cars of 45 tons capacity to very good advantage. A tremendous lot of work must necessarily be done for the transportation facilities are in a bad way. The congestion at ports and industrial centers is bad, due primarily to the lack of equipment. Contrary to the conditions in the United States there was very little change in the amount of traffic hauled after the signing of the Armistice. The greatest problem presented to the railway men in England was that of readjusting themselves to the change in the flow of traffic. This has been occasioned somewhat by the unadjusted freight rates between different ports in the country, the rates of the coastwise vessels having risen to such an extent that the railroads were overtaxed in handling coastwise business, as their rates had not been changed. Any definite action on rehabilitation will be held in abeyance until the disposition of the Transport Bill which is now before the Houses of Parliament.

General Remarks

Thus in all three of the countries under discussion, it will be seen that the work of rebuilding and rehabilitation of the railways is so vast that it is hardly possible for their local industries to provide their needs, and this presents the opportunity for American railway supply manufacturers. The greatest field, however, for our companies would appear to be with the countries which before the war went to the European countries for their railway supplies. This does not mean that the European markets should be neglected. In fact many of the South American railway companies and those in other portions of the world, are financed from Europe, and orders would naturally come from there. Those of the American companies which have opened offices or established connections in Europe, will undoubtedly derive benefit from this extension of their business.

In seeking trade from European countries, or in fact any country, American manufacturers must realize that they will be obliged to conform to the desires of the countries with which they are dealing, in the matter of design, except in the case of some minor or special apparatus. It is difficult for American manufacturers to sell their standard products

except where such happen to meet the desires of the railways with which they are doing business. The railways in England, France and Belgium, go into the study of designs a great deal more than is common with the railways in America. They have an extensive staff of engineers who study design from their own point of view, with the result that in these countries the designs of the railways are far more varied than on the railways in America. With the trend towards standardization in all of these countries, however, a much more common product will be evolved, which means that a large number of articles of the same design will be purchased. This will be favorable to American manufacturers who desire business from these countries, as it will enable them to do business on a larger scale and pay them to adapt themselves to the requirements of their foreign customers.

The railways do not look with favor upon the service facilities which American railway supply manufacturers so ably render in the States. Furthermore, in the contemplation of new designs or in the adoption of new practices, the assistance of the supply companies is not sought anywhere near to the same extent as in the States. After a design is once made, bids are asked for manufacture to that specific design, with the result that the manufacturers act more as manufacturers than as engineers, and the business usually goes to the lowest bidder. This makes it quite difficult for the high grade supply companies to make the showing and reputation as engineers that is common in the States. It is this peculiarity which is difficult for the American manufacturers to understand, but it is nevertheless important that it be carefully considered. Any attempt by American manufacturers to force American designs on foreign railways is liable to meet with opposition except where these designs are in accordance with their own ideas. It may be possible to do it if the roads in question need the material so badly that they are obliged to take what they can get, but it will react against the manufacturers when future orders are contemplated. Furthermore, the methods of doing business in foreign countries are quite different from American methods, and it is necessary for the American manufacturers to consider the foreign methods and work in accordance with them if they hope to become firmly established in the country in question.

One enthusiastic Paris representative of a large American concern was heard to state: "In order for Americans to obtain business in France it would be necessary first to teach American business methods to the French." A French man commenting on this remark stated that: "Before he did that it would be necessary to make English the national language of France." Too much emphasis cannot therefore be placed on the importance of American manufacturers adapting themselves to the physiological conditions and the peculiar characteristics of the countries in which they hope to do business. As has been repeatedly pointed out it was this adaptability that so enabled the German nation to develop its extensive export trade. Now that Peace is signed and the gates are open to German industry, America must "watch its step" if it is to hold the export business which has and will automatically come to it as the nation best equipped at the present time to supply the needs of the rest of the world.

BRITISH TRADE WITH BRAZIL.—The Brazilian commercial delegates who are shortly to tour the commercial centers of Great Britain under the auspices of the Federation of British Industries were expected to arrive in England before the end of June. They include Dr. Pandia Calogeras, the ex-Minister of Finance, Agriculture and Commerce, and other eminent Brazilians. Arrangements have been made for them to visit important works in a number of different cities.

An Analysis of the Plumb Plan

CHARACTERIZING THE PLUMB PLAN as "the most vicious piece of legislation" that has been presented to Congress since he has been in the Senate, Senator Atlee Pomerene of Ohio has addressed a letter to a committee representing the Hocking Valley System Federation No. 51, affiliated with the American Federation of Labor, in reply to a letter from the committee calling attention to the plan as evidence of their interest in behalf of "the masses of the people." The Senator said in part:

In your deliberations whom did you consult who was representative of "the masses of the people" as contradistinguished from those who were personally interested in the plan, and, if you consulted such persons, did "the masses" choose them or did you choose them, and what did they say either for or against it?

You tell me that you studied this for a matter of nine or ten weeks, and on the 23d day of July (Wednesday) you concluded your task, and on the following Monday these recommendations were presented to a called meeting of representatives and delegates, who unanimously adopted the committee's report.

Who were these representatives and delegates who were able at one sitting to understand the Plumb plan and advise as to what should be done in the interest of "the masses of the people"? Were they chosen by "the masses" to represent them?

You write me that the Plumb plan is the only "ultimate solution of the 'railroad problem' that has as yet been presented to your honorable body."

Many proposed plans are pending before the Interstate Commerce Committee of the Senate, and all of them are being carefully studied with a view of the best possible solution of the situation.

Did your committee or "the representatives and delegates who unanimously adopted the Plumb plan in its entirety" examine these plans, or any of them, before passing judgment upon them?

Now, let us go a step further. The railroads of this country, in round numbers, are valued at \$20,000,000,000. They are the web and woof of America's industrial, commercial, and social life. Under the Plumb plan it is proposed to take this property by purchase or condemnation from its stockholders, among whom are thousands, not to say millions, of the plain people of the country—old and young, the widows and the orphans—and to pay for them in cash payments or by the issuance to such owners of United States Government bonds. In other words, they shall be paid for by the people's cash or by their obligations. They are then to be managed and operated by the national railway operating corporation for 100 years, which shall have a board of directors to be composed of 15 men, five of whom shall be selected by the classified employees of the railways, five by their official employees, and five to be appointed by the President, not more than three of them to belong to one political party.

Suffice it to say that you and I both understand—even if we are not willing to admit it—that the 10 railway directors will have interests which will be at variance with the interests of the traveling and shipping public, who pay the bill; and while the other five appointed by the President are said to represent the public, which perhaps embraces about 100,000,000 people—I mean the people other than those who will be directly or indirectly interested either as the classified and official railway employees or their families—they will owe their appointment to a political power and, it is my judgment, may be influenced by the political purposes of the party in control of the Government.

Are you quite sure that when the Plumb plan was devised it was in the interest of "the masses"? If so, how does it happen that the bill is presented by the brotherhoods alone

and their associates? Why were not the interests of the general public consulted?

If the Plumb plan is sound economically and is for the interests of "the masses," why do you not suggest that similar legislation be adopted whereby all public utilities, including water works, electric light plants, gas and heating plants, be purchased and turned over to their employees and operatives, respectively?

If it is sound and in the interest of *the masses*, why do you not suggest that all the coal mines, iron and copper mines, be purchased by the government and turned over to the operatives in the same way?

Why do you not suggest that all the manufacturing and industrial plants of the country be purchased with government funds or by the issuance of government bonds and turned over to their operatives in the same way?

Why do you not advise that all the stores be purchased and turned over to their operatives in the same way?

Why do you not recommend that all the banks of the country be acquired by the government and turned over to their operatives?

Why do you not ask, in the interest of "the masses," that the government purchase all the farms of the country and turn them over to the employees on the farms?

And, lastly, may I suggest that if one man should happen to own two houses, one of which he rents, why do you not ask that the second house shall be bought by the government and turned over to the renter?

Where is this going to end?

My friends, permit me to say the Plumb plan has nothing akin to it outside Bolshevik Russia.

It is worse than socialism.

Socialism contemplates the public ownership of property to be controlled and operated by the public for the public. The Plumb plan contemplates the public ownership of the railroads for a class. As neither class of these employees will have any stock, their interests will be one and the same as against the public. In other words, \$20,000,000,000 worth of property bought by money belonging to 110,000,000 people is to be turned over to 2,000,000 railroad men, representing, perhaps, including their families, 10,000,000.

Does this seem to be for the benefit of "the masses"?

Mr. Plumb in his testimony before the Senate Committee on Interstate Commerce in February assumed that the capital invested amounted to \$18,000,000,000 approximately. In his testimony last week before the Interstate Commerce Committee of the House he estimated that all the present owners would get for their property is \$13,000,000,000. So, according to his own testimony, Mr. Plumb's plan, if enacted into law, will substantially confiscate \$5,000,000,000 worth of property belonging to private owners.

And what would be the result if it fails?

Invoking the principle of brotherhood—a name I love—do you not feel you ought to be consistent, and while asking for this investment of the public funds for your benefit to likewise ask for the benefit of a proportionally equal amount of government funds for every other business enterprise in the United States, and turn that over to the employees of those several enterprises?

Does not the principle of fraternity suggest this?

And by the time we get through with it there will be \$240,000,000,000 of government bonds issued and on the market.

My friends, this Plumb plan spells ruin for beloved America.

In the past few years a good many people have urged federal ownership and control of the railroads, the telegraphs, and the telephones. In view of recent experiences most of them who have had no selfish purpose to serve have changed their views.

Government control of these utilities has been so complete

that it does not differ materially from actual government ownership, and there is no such radical difference between the present government control and operation and that provided for in the Plumb plan as to warrant anyone in saying that while the former has been a failure the latter will be a success.

From the standpoint of operation every user of the railroads, telegraphs, and telephones knows that the service has been worse than during the private control, excepting only the condition of the railroads during the last two months of private control, which was due to war conditions.

Do you really believe that under the Plumb plan you can turn this deficit under government control either into a surplus for the account of the government or the public or into better service for the country?

I do not believe it can be done except by one increase after another in transportation rates.

Permit me to make another suggestion: Since government control was begun the wages to the employees have been increased about \$1,000,000,000. The director general, on July 31, 1919, informed the President that additional increases were demanded which would aggregate, if granted, about \$800,000,000 more per year.

I have no knowledge as to whether the conditions are such as to justify this increase or not, and I express no opinion with regard to it. I want the railroad men and all laboring men to be liberally paid, whether under public or private control.

But this is only an incident to the larger question to which I want to call your attention. If the conditions are such that this increase is justified, then I am for it. I await the proof before I shall decide it.

But when your representatives come to Washington and not only ask this increase but demand that the Congress of the United States shall buy these properties at a cost to the government of \$18,000,000,000 or \$20,000,000,000 and turn them over to the national railways operating corporation for management and operation I want to say to you as one American to another it is neither fair nor American for them to insinuate revolution, as they have before the Interstate Commerce Committee of the House, unless their demands are granted.

And let me suggest that the people at large have not expressed any desire for this plan, but members of your brotherhoods—I do not mean the chiefs—have been in Washington making their threats as to what would happen unless this legislation is enacted. As one Senator I shall always be open to conviction, but I never yet have yielded to a threat, and I never will.

Of course, I know that you do not approve these methods. Law-abiding citizens, real Americans, never do approve them. It is only men of the Bolshevik type of mind that ever resort to them.

Among the threats that have been made are threats of a nation-wide strike. I do not mean to suggest that the chiefs of the brotherhoods have suggested a nation-wide strike, but some of the members of the brotherhoods have made these threats here in Washington to Senators. I am sure that you do not give any countenance to strikes under present conditions.

I believe in the right of the laboring man to use the instrument of the strike under proper circumstances, but I do not believe the occasion is here or ever has been here or ever will be here which will justify a nation-wide strike, with all the distress it will bring, not only on the public at large but on the strikers and their families.

With a general strike on in this country, tying up all the railroads, the products of the mine and the farm and the factory could not be moved to the centers of population and in one week's time the people of our great cities would be starved, and in winter frozen. The people of these centers

of population include the wives, the children, and the babes of railway men as well as others. It is too shocking a situation to even contemplate.

A sub-committee of the Interstate Commerce Committee, of which I am a member, has been engaged for a number of weeks in preparing a bill providing for the reorganization and regulation of the railroads to present to the full committee for its consideration. I hope it will appeal to the sober sense of the public. I can give no assurances as to whether it will be approved or disapproved, but of this I am convinced, that the American public never will approve the Plumb plan or anything akin to it.

The Plumb plan is the most vicious piece of legislation that has been presented to Congress since I have been in the Senate. I would feel that I was contributing to the ruin, not only to the transportation system of the country, but to its financial and industrial breakdown, if I voted for it. It would lead not only to the ruin of the whole people but to every railroad man as well.

Notwithstanding the statement in your letter to the effect that this plan was unanimously adopted at a meeting of the representatives and delegates to whom it was submitted by you, I venture the assertion that when they understand it the vast majority of them will oppose it.

Much has been said by the brotherhood chiefs and their counsel in the last few days here in Washington about the democratization of industry, and the Plumb plan is referred to as the means of democratizing transportation. A careful study of the bill will show that it is not democracy in transportation for which it provides, but autocracy in transportation.

Mr. Plumb the other day referred to the Wall Street control of the railroads. That was true in the past. It is not true now. Wall Street has many vicious things to its credit in years gone by, but the captains of finance have never demanded \$20,000,000,000 of the American people's money at one time!

The Plumb plan out-Harrimans Harriman in his palmist days!

The public does not want to be skinned, but if it must be skinned it will make little difference whether it is by Wall Street or by the methods provided for in the proposed Plumb plan.

It was my pleasure in 1916 to support your claims for the Adamson law, because I believed that you were entitled to better working hours and to better compensation, and so long as I am in public life it will be my pleasure to do whatever can be reasonably done to advance the interests of labor, but bear in mind that it is not "every one who cries unto me, 'Lord, Lord,' shall enter the kingdom of heaven," and it is not every man who comes around declaiming in favor of labor who is labor's friend.

I am sure that a sober second thought will persuade you that this bill ought to be defeated.

Andrew Carnegie

ANDREW CARNEGIE, the retired steel manufacturer and great philanthropist, who has just died was superintendent of the Pittsburgh Division of the Pennsylvania from 1859 to 1865. He began his railroad work as a telegraph operator on the Pennsylvania. Thomas A. Scott, who was later president of the Pennsylvania and was superintendent of the Pittsburgh Division before Carnegie was the man to whom young Carnegie owed his start in the steel business. Later in life a difference arose between the two men and from about the time of the panic of 1873 until the time when Mr. Carnegie sold his vast steel interests to the United States Steel Corporation, he persistently fought the Pennsylvania Railroad, or, as Mr. Carnegie, himself, would have put it, the Pennsylvania fought him.

As a steel man and as a great philanthropist, Andrew Carnegie's history has been and is being discussed in newspapers all over the world; but, interestingly enough, it was his threat to enter the railroad field on a large scale which was probably the deciding factor in the decision of J. P. Morgan and the varied interests which he represented to eliminate Andrew Carnegie from the steel business by buying his steel mills at Mr. Carnegie's own price. Of course, the history of the formation of the United States Steel Corporation is far more complex than merely the decision of the Morgan banking house to buy out Mr. Carnegie.

Mr. Carnegie's career as a steel manufacturer was during the period when railroad rebates were demanded and given. With his great resources, Mr. Carnegie had an advantage in this game which he used with ruthlessness and success. He built the Bessemer & Lake Erie partly as a legitimate railroad project—he could bring ore from the Lakes south on it and could give it coal northbound—and partly as a club to hold over the Pennsylvania Lines West in his demands for lower freight rates than his competitors. At one time he

threatened to build a canal from Lake Erie to the Ohio river, and quite possibly would have carried out his threat had there been water enough to fill the upper levels; but the cost of pumping water up to these levels would have been prohibitive.

When the Goulds turned an eye toward Pittsburgh in George Gould's attempt at connecting up a trans-continental Gould system, Mr. Carnegie agreed to give the projected Wabash-Pittsburgh Terminal a third of his tonnage out of Pittsburgh. As a matter of fact, the Wabash-Pittsburgh Terminal was never in a position to take advantage of this contract and its terms were never carried out.

When Alexander Johnston Cassatt decided to take a firm stand against all rebating by the Pennsylvania system, Andrew Carnegie threatened to build a railroad from Pittsburgh to Baltimore. Although Morgan & Company were not the bankers for the Pennsylvania Railroad, other important in-



Andrew Carnegie

terests of theirs were vitally affected by the continuous state of warfare which Mr. Carnegie maintained in the steel industry, and this threat to bring chaos into the eastern trunk line situation gave the bankers an additional and potent incentive to eliminate for once and all the too aggressive steel manufacturer. The result was the formation of the United States Steel Corporation and the retirement of Mr. Carnegie from the business of making money and the beginning of his long career as a discriminating, broad-minded philanthropist.

He was one of America's very great citizens.

Doings of the Railroad Administration

WASHINGTON, D. C.

DIRECTOR GENERAL HINES announced on August 8 that the Railroad Administration has sent inquiries to a number of steel companies asking each at what price it is ready to supply 100,000 tons of steel rail. Inquiries relate separately to Bessemer rail and open hearth rail. Replies to the inquiries have been requested by August 16. A decision as to the amount of rail to be purchased will be reached following the receipt of the proposals.

This will be the second rail order placed by the Railroad Administration since the railroads were taken over a year and a half ago. Orders for 200,000 tons were placed in May.

Railroads to Co-operate

with Vocational Education Board

W. T. Tyler, director of the Division of Operation, and W. S. Carter, director of the Division of Labor, have issued the following joint circular authorizing co-operation by the railroads in the establishment of part-time schools for railroad apprentices and others:

"The Federal Government has created under the provisions of an act of Congress, approved February 23, 1917, a Federal Board for Vocational Education.

"The purpose of this act is to provide for the promotion of vocational education in the trades and industries and in agriculture in co-operation with the various states, and an appropriation by the Federal Government is available for such work.

"The value of vocational training for mechanics and apprentices in railroad shops has been recognized by many railroads which have established schools for the training of such men. It is the desire of the Railroad Administration not only to assist and encourage such training where established, but also to extend the system to roads which have not established such schools, and it is believed that this can be best accomplished by co-operation between the United States Railroad Administration and the Federal Board for Vocational Education in extending this work.

"It is therefore desired that the different railroads under control of the United States Railroad Administration co-operate with the Federal Board for Vocational Education in the establishment of part-time schools for railroad shop apprentices and others who come within the scope of the act. Where it is found necessary in order to facilitate this work, railroads will be authorized on request, to fit up suitable study or class rooms at the different shops where such schools may be held. Where such schools are established, railroads will be authorized to pay apprentices at their usual rate for the time spent in attending such schools.

"Apprentices on roads where such schools are established will be required to attend not less than 208 hours per year.

"Complete information concerning the establishment of these schools in co-operation with the Federal Board for Vocational Education may be obtained either from the board direct or from the assistant director, Division of Operation, in charge of the Mechanical Department.

"In the preparation of a course of study, due attention

must be given to meet the needs of railway shop employees, and such subjects as shop practice involving the manipulation of machines used in general repair and construction work and to related science, mathematics and drawings should be fully provided for.

"To provide uniformity as far as practicable in these courses of study, the subjects embraced therein should be submitted to the assistant director, Division of Operation, in charge of the Mechanical Department, for approval."

Distribution of Stock Cars

The Car Service Section has issued the following rules to govern the distribution of stock cars on all railroads:

1. The distribution of privately owned stock cars as between railroads and as between stations on each railroad will be authorized by the owners of such cars.

2. Such privately owned stock cars as are placed for loading by direction of the owner shall count against the daily allotment of cars to the shipper.

3. The owners of so-called private stock cars will give distribution to all their equipment before calling upon the railroads for assistance in filling orders for stock cars for their shippers or for their account.

4. If the number of privately owned stock cars placed for a shipper equals or exceeds that shipper's pro rata share of the available supply, he shall not be entitled in addition to any railroad-owned stock cars.

5. If the number of privately owned stock cars placed for a shipper is less than his pro rata share based on his daily ability to load and ship, he is entitled to be allotted railroad-owned equipment in addition thereto to make up his pro rata share.

6. The railroad will distribute available railroad-owned stock cars on a pro rata basis which shall take into consideration the ability of the shipper to load and ship.

Railways and the Peace Treaty.—Articles 365 to 374 of the Peace Treaty are specially devoted to railways. Provision is made regarding rates and facilities for merchandise traffic between the Allied and Associated countries on the one hand and Germany on the other, and the Berne conventions of 1890, 1893, 1895, 1898 and 1906, dealing with the transportation of goods are renewed. Germany is also bound by any new Berne Convention which may be concluded within the next five years, and is required to co-operate in the establishment of such through passenger services as are required by the Allied and Associated Powers. Through emigrant traffic to or from Associated and Allied ports must not be impeded or delayed by any "technical, fiscal or administrative measures." Under an important technical provision, German goods wagons must be equipped so as to prevent "hampering the action of the continuous brake which may be adopted" by the Allied and Associated Powers within the next 10 years, and the wagons of these countries must be accepted on the German railways. Germany undertakes to accept within 10 years the denunciation of the Gothard Convention of 1909, which the Swiss Government has already declared its desire to abrogate. The Treaty contains provisions relative to the handing over of the railways and rolling-stock which Germany is called on to surrender under the Peace terms, and provision is also made for contingencies arising out of the construction of new railways which traverse new frontiers established by the Peace conditions. —Railway Gazette, London.

British Investments in Argentina. It is known, says the National Bank of Commerce, that British capital in railways in Argentina amounts to \$1,138,756,484. This represents about ten times the railway investments of any other foreign country in Argentina.

Plumb Plan Hearing Before House Committee

Glenn E. Plumb and A. B. Garretson Sharply Questioned by
Congressmen—Revolutionary Talk Soft-pedalled

WASHINGTON, D. C.

THE PLUMB PLAN has had its day in court and has relapsed into a state of propaganda. Six days of hearings before the House committee on interstate and foreign commerce were brought to a close on Tuesday, and the committee, after a brief speech by the chairman complimenting the advocates of the plan on their forensic ability, returned its attention to other phases of its search for a solution of the railroad problem, leaving the proposed sovietization of the railroads in the able and willing hands of the Plumb plan press and lecture bureau, the 14 railroad labor organizations and the American Federation of Labor, who can doubtless keep it before the public for some time to come, but who failed miserably in their first efforts to enlist support in Congress.

Glenn E. Plumb, counsel for the organized railroad employees and the author of the plan, was the principal witness before the committee. He presented a long, prepared statement, some extracts from which were published last week, on his plan, and his version of various other plans, and was subjected to a most critical examination for three days by members of the committee. He was followed by A. B. Garretson, former president of the Order of Railway Conductors, after which he returned with a series of "charges" against the railroads which he had promised in his opening statement. After having begun the hearing with thinly veiled threats of what would happen to Congressmen who fail to support the plan and of a "revolution" in the country if it is not adopted, the labor leaders toward the close adopted a less belligerent attitude. As the members of the committee plainly showed their indignation, Mr. Plumb gradually softened his interpretation of the word "revolution," and insisted that the ideas of force or threats have no part in the Plumb plan campaign, but that it is to be carried on entirely by "appeal to reason." He defined "revolution" at various times as meaning the peaceful use of the ballot, that the employees would "cease to serve"; that they would "object for all they are worth" if their plan is not adopted, or as "raising hell generally." The employees would not strike to gain the Plumb plan, he declared, but they might strike for higher wages to meet the increased cost of living, but if the plan should be adopted they would manage to get along some way until they could show a surplus from the operation of the railroads. He admitted that he would not expect Congress to adopt his plan at once, nor until after the majority of the public has indicated its support of the plan, but he declared that sentiment for it is "spreading like wildfire."

He suggested that the present government control of the railroads be continued for a time, but with a reduction in the guaranty to the railroads so the owners will share in the deficit. Nearly all the members of the committee questioned Mr. Plumb, and with one exception indicated marked hostility to his plan in nearly all its aspects. Representative Sims, who introduced the bill by request, made a 20-minute speech to say he was not committed to the bill, but approved some parts of it, and reserved his judgment as to the plan as a whole.

Following his prepared statement, Mr. Plumb discussed the provisions of his bill section by section.

In reply to Mr. Sims, Mr. Plumb said it is not proposed to take over the railroads subject to any liens, but to take over the entire property, and that the Government would have nothing to do with the division of the purchase price as between stock and bond holders. Mr. Plumb said his plan provided for a complete amortization of capital through the sinking fund, and new capital improvements would be paid for out of surplus or new issues of bonds. He thought the surplus as it increased would be more than sufficient because the unification and pooling of facilities would make many capital expenditures unnecessary and ordinary maintenance and renewals would be all that would be required for many years. By that time the surplus fund would have accumulated so that no new capital would be necessary. He suggested that Government arsenals and other plants could furnish many supplies needed by the railways with-

out profit and at a lower cost than if they were purchased from private concerns, and he readily adopted a suggestion by Mr. Sims that the Government might furnish food and other supplies to the employees at cost plus the cost of distribution.

When some one referred to the employees' proposed wage dividend as a "profit" Mr. Plumb preferred to define it as "a benefit in excess of their wages," which would result only from increased efficiency and without which efficiency could not be created.

Plumb Values the Railroads

Representative Barkley asked Mr. Plumb's opinion of the cost of the railroads as determined by his ideas of value. Not to exceed 12 billion dollars, and probably not more than 10 billion, represents money actually contributed to the public service by the corporations, Mr. Plumb replied. When Mr. Barkley expressed an idea that this might be a little rough on



G. E. Plumb

the holders of securities that had paid par or more for them, Mr. Plumb said he was not interested in what they paid, for that was a private transaction in which the public had no concern.

"But what would become of the extra six billion," asked Mr. Barkley.

"It isn't in existence now," calmly replied Mr. Plumb. "The security owners would receive just about what they could get in the market today."

"Why do you double the wage dividend of the officials?" Mr. Barkley asked.

"Because our plan is so totally unsocialistic that we believe in recognizing that responsibility is entitled to a higher rate of reward or incentive." He would not say that the lower grade of officers should receive higher pay than the higher grade of employees.

In reply to Chairman Esch, Mr. Plumb said that while the organizations desire as prompt action by Congress as is consistent with a thorough study of the plan and did not desire forced action, but proposed to get every possible influence behind the bill, they realized that it would take some time. He insisted, however, that events move more rapidly now than formerly.

"But some railway employees are showing impatience and are striking," said Mr. Esch. "Would that be such a method as you suggest?"

"Not to secure the adoption of the plan," said Mr. Plumb, "but these disturbances have no relation to the plan. They have been brewing for months. The fact that they have occurred simultaneously with the presentation of this plan is merely due to your invitation to us to appear this week. Otherwise the bill might not have been introduced until October."

Railroads Should Not Be Returned

Mr. Esch asked if Mr. Plumb was still in favor of a five-year extension of Federal control of the railroads, which he had advocated before the Senate committee in February.

"I do not believe now that five years or two years would be necessary," replied Mr. Plumb. "I believe there should be an extension unless there can be very prompt action, but not under the terms of the present Federal control act. We should require the owners of the railroads to share the deficit. When I spoke of a five-year extension I did not think public opinion could be brought to the point of accepting our plan within two years, but now I believe less time will be required. We are making every effort to get the approval of public opinion and hope to be able to accelerate it to some extent. I would not be surprised at almost any social development in America within 60 or 90 days."

"Do you realize the temper of the House and of the Senate and the inclination and purpose of this committee?"

"Yes, but I believe they have been greatly enlightened by the developments of the past two weeks. I have been amazed

at the lack of information on the part of the Senators and Congressmen with whom I have talked during the past three months as to what has been going on. I never expected to reach the present issue in less than a year or two years, but I have been overwhelmed by the force of the sentiment of the men."

"Do you think it should force Congress to speedy legislation?"

"I think it should force Congress to a speedy consideration of these questions, perhaps to the extent of laying aside all other questions."

When Mr. Esch said the committee had been doing that for four weeks, Mr. Plumb asserted that he didn't believe the committee "had been brought into contact with the people before this week."

"Do you believe, from knowledge you have gathered recently, that you can affirm that a majority of the people of the United States will stand for the doctrine of government ownership of the railroads?" asked Mr. Esch.

"At this time I would not say so, but I feel absolutely assured that the great majority are so dissatisfied with their present condition and so turned away from their past condition that they are rapidly coming to the support of this plan, and that when given an opportunity for education they will demand it. I wouldn't ask Congress to pass it ahead of that event."

Mr. Esch asked if the organizations would favor a national referendum to ascertain the sentiment of the country.

"There are other ways; for instance, if you find through the press and from the volume of communications honestly sent to you that the great mass of the people want this plan then I think that you can consider that you have the sentiment of the country," said Mr. Plumb. He admitted that this could not be accomplished without propaganda, but he asked the committee to distinguish between the "manufactured

or purchased propaganda" in favor of selfish interests represented by form letters to Congress and "spontaneous propaganda."

"Ours does not have to be purchased," Mr. Plumb said. "It is offered to us."

When Mr. Esch suggested that the committee would probably receive propaganda both for and against the plan, and mentioned the farmers as possibly being opposed to it, Mr. Plumb said the committee should listen to both sides and find out which propaganda represented the people.

"I think you will find the farmers do want the plan," he said.

"What information we have received would indicate that they do not," said Mr. Esch.

When Mr. Esch pointed out that the railroads pay about \$214,000,000 in taxes to State and local governments, and that many States rely to a large extent on railroad taxation, Mr. Plumb suggested that to avoid hardship the taxes might



A. B. Garretson

be continued, but should be gradually reduced at the rate of 10 per cent a year.

The "Temper of the People"

Representative Barkley asked Mr. Plumb to reveal to the committee just what he had in mind as to the temper of the people. Mr. Plumb said he had come to Washington in May expecting to spend some time in the preparation of his bill, and a brief on it, but that he had not been able to keep up with the demand on him to make speeches in all parts of the country, and that in advance of any newspaper publicity his office had been overwhelmed with demands for copies of the circulars and pamphlets.

"I didn't think it was possible to interest the public so much," he declared. "It is spreading like wildfire. We are being flooded with letters from employees and even officials and security owners, saying they believe this is the only plan that affords them any safety. I wouldn't be surprised to see the majority of the people rise and demand this plan by any means in their power." He spoke of addressing a meeting at St. Louis, after which some of the men came to him and declared that if they couldn't get the Plumb plan or something like it there would be a revolution. Mr. Barkley was curious as to what he understood to be meant by the word "revolution."

"Those men feel, along with millions of others," replied Mr. Plumb, "that they have reached a point of diminishing returns which they cannot stand any more, and that rather than stand any more they will cease to serve. If we don't work this problem out quickly we will have no opportunity to work it out."

"Do you believe that the passage of this bill will to any appreciable degree solve the cost-of-living problem as to all the people?" asked Mr. Barkley.

"It will do more than anything else. We are confronted now with a demand for \$700,000,000 more rates or an appropriation. Either one will increase the cost of living, especially if you increase rates. If this plan is adopted we can assure the public immediately that there will be no increase in rates, and if we can save the difference between what we are paying the railroads and what we ought to pay in the interest charges we will have a surplus to start with, and if we get rid of the friction between officers and employees and give a motive for efficiency, and unify the railroads, we ought to be able to give a 5 per cent reduction very shortly."

Mr. Plumb frequently referred to the profit on the cost of transportation and the profit on wages. When Mr. Barkley asked what this meant he said that commodities are subject to several freight movements, and each one who handles them figures his profit as a percentage on the cost to him, which includes labor and freight. He said Congress might pass a law declaring that transportation cost shall not be made an element of profit. "We have got to a basis where we calculate profit on the cost of production, not on the investment," he said.

Representative Sweet asked why, if the government was to own the roads, it was not given authority to operate them.

"Because we do not believe this great industry can be operated by a political autocracy. If we leave operation in the hands of political appointees we would place the railway system in the hands of politicians and that, we submit, cannot safely be done. Business should be left to individual initiative, and we now restore it to the individual."

Mr. Sweet read some extracts from statements made by W. G. Lee before the wage board and asked about the various demands made for increases in wages. Mr. Plumb professed ignorance, saying he had nothing to do with the wage demands and had not been consulted.

An example of "spontaneous propaganda" was called to the attention of Mr. Plumb and members of the committee, when the hearing was resumed on Friday, by Representative Web-

ster, who had previously asserted that he did not propose to be intimidated by threats. Mr. Webster produced a pile of letters he had received from his district from members of the Brotherhood of Railway Carmen and the Brotherhood of Railway Clerks, printed in imitation of typewriting and all alike, declaring "that under government control of the railroads wages have been increased, the work day shortened and our working conditions improved, that labor and the family have had more of the necessities of life," and that "therefore he who obstructs the government in this policy of control or ownership, becomes our direct enemy and shall so be posted, and a record of his action shall be kept for future reference, and it shall be our pledged policy to remove him from whatever political line of trust the public has given into his keeping. * * * He who strives to object or demean labor, or in any political way detract from the equality of labor, shall be posted throughout the length and breath of this fair land, as an undesirable."

Mr. Plumb was asked whether he had anything to do with the censoring or preparation of propaganda letters to Congressmen. He denied that he did, saying they represented the "spontaneous combustion of the men outside."

Mr. Webster wanted to know if he endorsed such letters as part of the educational campaign. He would not say that he would endorse the form of the letter, but referred to it as an illustration of his statement that the situation is getting beyond control. He said any one had a right to write to his Congressman, and in certain instances, as when an issue arises which has not been submitted to the people at the polls, he thought threats were justified, as they meant nothing more than a declaration that the writer would not vote for the Congressman and would try to defeat him and that such letters need not worry any one unless supported by a majority of the public. He at first said he would not have advised a threat of posting a man, and later said if the letter had been submitted to him he would have advised an entirely different letter.

"Is it to be understood that your campaign of education and enlightenment is to be carried on by threats?" asked Mr. Webster.

"That is not our plan. We have tried to appeal to reason. We are presenting to this committee the best reasons we can and we are presenting the same reasons to the public through every means at our command, the press, the labor press, the magazines, our own publications and from the lecture platform, and you won't find any threats in any of our matter. But such reactions as this are inevitable, and are bound to come to you. That we can't control. It is not the method the leaders desire to have followed out, but you must make allowance for this tremendous unrest."

Representative Rayburn asked if the Plumb plan does not provide for a "soviet system." Mr. Plumb said he did not know very much about Russian affairs. Mr. Rayburn asked how the average railway employee could be expected to understand the provisions of the bill when Mr. Stone and Mr. Morrison had admitted they did not. He said he had received 200 identical letters from railway employees in his district demanding that he vote for government ownership and operation. Mr. Plumb said the employees understood the principles of the bill if not its provisions, and that "one of the major organizations" had endorsed government ownership and operation before the Plumb plan was proposed, but that later all had adopted it, at their various conventions held in May, June and July. Mr. Rayburn asked if it was not a little out of proportion to have 10 members of the proposed board of directors represent the 2,000,000 employees and only 5 to represent all the rest of the people. Mr. Plumb objected to grouping the managing officials with the employees.

"Would you consider it fair to the workers in other industries to socialize only the railway industry?"

"The employees of other industries haven't asked for it,"

replied Mr. Plumb. "I don't believe it would be wise to apply the plan to all industries at once, but I do believe it would be well to apply it to the railroads which are purely governmental in their functions."

Rates Not to Be Reduced Immediately

In reply to questions, Mr. Plumb said he would not say that rates would be reduced immediately, but thought it could be done in a year. When asked how, he said \$500,000,000 would be saved by the difference between the fixed charges on the reduced capitalization and the amount now guaranteed by the railroads. No one called his attention to the fact that he was comparing his fixed charges with a guarantee, only a small part of which is being earned now and a large part of which has not been paid. He also spoke of the gains to result from the increased efficiency when the men are working for themselves instead of for the Government, and said that the railroads had steadily reduced their cost of operation up to five or six years ago, when they began the policy of increasing rates. Now, he said, any further increases in rates will not result in increased revenue.

When Mr. Rayburn remarked that "we need not be alarmed because a few people say we will have a revolution," Mr. Plumb said he had not referred to any overthrow of the government, but merely to an "overturning of the industrial system."

Representative Winslow sought to find out something about the financing of the Plumb Plan League, but did not learn much. Mr. Plumb said that individual members paid \$1 a year dues and lodges paid \$10, and that there had been 1,500,000 telegraphic requests for copies of the literature, but that the membership blanks had only recently gone out, and the applications had just begun to pour in during the week before the hearing. At that time, he said, the rate at which they had come in would indicate an annual income of about \$125,000, but that he expected it might reach \$500,000 within a year, and it might even go as high as \$6,000,000. This, he said, was to be used for "publicity, pure and simple."

"Pitiless publicity?" asked Mr. Winslow.

"No more pitiless than my examination before this committee," said Mr. Plumb.

In reply to a question as to whether any shippers' organizations had endorsed the plan, Mr. Plumb replied in the negative, saying that the intermediate shipper is not interested in the amount of the rate because he passes it on to the consumer. Mr. Winslow asked how the railway dollar would be distributed under the Plumb plan. Mr. Plumb estimated 70 per cent for operating expenses, as compared with 88.7 per cent during the first six months of 1919, 20 per cent for fixed charges and 10 per cent for surplus to be divided between the employees and the government. The 1 per cent for the sinking fund would come out of operating revenues if they were sufficient. Otherwise it would be set aside from any funds in the Treasury. Mr. Plumb said he would not set aside any contingent fund for lean years and admitted that any deficit would have to be provided for by an increase in rates. Later, in asserting that the employees could not raise their wages until after they had earned a surplus, he said that if there was a deficit caused by wage increases the charter would be forfeited.

To meet the skepticism of many members of the committee as to how the government could expect to acquire the railways with 4 per cent bonds, Mr. Plumb declared that the "investment fund" is practically a fixed amount, and the present owners of railway securities would practically have no other place to put their money, and so would be glad to take 4 per cent government bonds. He asserted that these bonds would have even better security than Liberty Bonds, because in addition to the security of the taxing power they would have the security of earning power. Most railroad stock issues have been illegal, Mr. Plumb said, as in violation of

State laws prohibiting the issuance of stock in excess of property and therefore he would have no hesitation about taking over the properties at a price which would allow no reimbursement for a large part of the security issues. He repeated his declaration that they had never represented value, and that his proposed method of valuation would about equal the present depressed market value.

Representative Sanders asked if the Plumb plan was not a "soviet plan" instead of a government ownership plan.

"I don't know what a soviet plan is," replied Mr. Plumb, "but I don't believe the popular misconception of it."

A Definition of "Revolution"

Mr. Sanders pressed Mr. Plumb as to the meaning to be attributed to the word "revolution" as used by the man who said there would be a revolution unless the Plumb plan or something like it were adopted. In reply to Mr. Barkley the day before Mr. Plumb had said he understood the word to mean that the men would "cease to serve." Mr. Plumb at first answered Mr. Sanders by saying revolution meant "a change in the existing order, an overturning of the industrial system."

"But that is what the Plumb plan does," insisted the Congressman. "What is the alternative?"

"Well, I wouldn't wonder if he meant that those who do not agree with his ideas shall be removed from office, by the use of the ballot," said Mr. Plumb.

"That is not revolution," insisted Mr. Sanders. "Tell us what that man's message to us means."

Mr. Plumb tried again: "It means that they are going to get liberty through constitutional and lawful forces if they can and I hope it will come that way, but if the powers of reaction prevent it, it will come in some other way."

"What other way?"

"In the way it has always come throughout history."

"Yesterday you interpreted the word to mean strike," said Mr. Sanders, "but today you interpret it differently."

On the following day Mr. Plumb volunteered a new definition of the word "revolution" by quoting from a speech by a Congressman to the students at Yale, advising them to "spread the gospel and raise hell generally." "That is about what these men mean," he said. "They mean they will object for all they are worth. It doesn't mean any overturning of the government."

Answering questions by Mr. Sanders as to the prospects of net profits, Mr. Plumb said of course they would depend entirely upon the perfection of the organization for efficiency and naturally 100 per cent efficiency could not be expected during the first year, but he thought the difference between the proposed rate of interest and the present guaranty to the railroads would produce some surplus for the first year. He said the employees had proposed to the Railroad Administration a plan for a "scientific scheme for efficiency" to be tried out on one or two divisions, but had not been given the opportunity.

When he suggested that the surplus for the first or second year might be anywhere from \$50,000,000 to \$400,000,000, Mr. Sanders wanted to know if the employees and officials would not be much more interested in trying to get their pay increased than in the share of a surplus. This Mr. Plumb denied by contending that neither the officials nor the employees would let the other have an increase in pay that would produce a deficit because that would result in a forfeiture of the lease and that the double dividend rate of the officials would keep them from combining with the employees.

"But would not the Interstate Commerce Commission increase rates to provide for an increase in wages?"

"The Interstate Commerce Commission has held that an increase in wages is not sufficient ground for increased rates," replied Mr. Plumb.

When Mr. Plumb said that the power of capital would be

removed from the situation, Representative Montague asked if labor would not reserve its power to strike.

"No law can be devised that will deprive them of the inherent right of revolt," declared Mr. Plumb.

"Has there ever been any repression of the railroad employees to prevent their rising to the highest offices?" asked Mr. Montague.

"There has been no great repression," Mr. Plumb admitted, "but the kind of initiative that has been rewarded has been the kind that has been able to extort the greatest profits from labor, not the kind that increases their efficiency. The officers who have come up from the ranks have been able men, but they have not come up by the impulse of the employees, but by the selection of the autocrat."

"I wish you could satisfy me that your 10 members of the board of directors could be removed from the possibility of autocracy," concluded Mr. Montague.

Representative De Walt insisted that the railroads are now owned by the public by reason of the large indirect investments of the savings of the people in railroad securities, and that both capital and labor should receive a fair return and no more. Mr. Plumb insisted that capital would get a return it would be satisfied with because of the great security afforded by his 4 per cent bonds. Mr. De Walt also pointed out the possibility of a political crisis under which the Presid-directorate men who would side with one of the other two dent might appoint as the five public representatives on the elements of the directorate and thus give it complete control of the organization. Mr. Plumb could see no ground for fear of such a possibility.

"Are you sure you are voicing the sentiments of those you represent when you say that you intend to gain your purpose only by legal or legitimate methods?" asked Mr. De Walt.

"I am sure," replied Mr. Plumb. "No one has said we intend to enforce this legislation by a strike. There has been a great deal of misrepresentation in the newspapers. The only mention of a strike has been in connection with wages. We would be blind to our own interests if we tried to get legislation by threats."

"You never said anything truer than that in your life," declared Mr. De Walt.

"But when we say there will be trouble if something isn't done we are merely stating a fact to emphasize the necessity of finding a solution because of the feeling of unrest and discontent over the country," continued Mr. Plumb.

After having been questioned by the committee regarding his plan, Mr. Plumb completed on Monday his prepared statement, making an attack on his version of the plans of the railway executives, the National Association of Owners of Railway Securities and the United States Chamber of Commerce. His principal argument was based on his assertion that these plans provide for a guaranty based on property investment, and he declared that for Congress to adopt any of them would legalize the book property accounts. To attack the property accounts he read quotations from old decisions of the Interstate Commerce Commission calling attention to the defects in the property accounts, but he did not read some of the commission's later expressions in which the commission treated of them as possessing considerable practical value. He asserted that while the bill left the decision to the courts his construction of the law would allow no value for securities issued without investment, unearned increment, surplus but back into the property or grants, aids, gifts and donations. Mr. Montague remarked that if the courts fail to sustain his position it might cost more to acquire the roads than he had estimated. Mr. Plumb admitted this, saying the railroads were left free to make their claims before the courts.

Before closing Mr. Plumb referred again to the threatening letters received by Mr. Webster, and read a telegram from the secretary of the railroad section of the Central Labor Council

of Spokane, saying the letters had been sent before the Plumb plan had been adopted, and had no connection with it. Mr. Webster replied that they had all been received since he became a member of Congress in March, that the Plumb plan was made public in February, and that he knew of no other plan for Government ownership. Mr. Plumb said he had never seen the letters and that they represented no effort to coerce any one to support the plan.

A. B. Garretson, former president of the Order of Railroad Conductors, made general arguments in favor of the Plumb plan and its so-called "democratic" features, and described eloquently the State of unrest which it purports to be intended to relieve. He carefully refrained from making any threats and avoided the word "revolution" but he declared that unless something is done to relieve the conditions which cause the unrest it is "bound to find a channel of expression which is the last thing the average citizen wants to see." "The recent sporadic strikes," he said, "are only rumblings. Nineteenths of the energy of the labor leaders is now given to sitting on the lid. We don't want to overturn the government, but we want the government to function. Unless relief is found from the unreasonable pressure of living conditions we are bound to have trouble."

Mr. Garretson declared that distribution is a national function, and that transportation should be furnished to the people at cost. Mr. Merritt pointed out that he was assuming that transportation under government ownership would be furnished at a lower cost. This must follow, Mr. Garretson said, because there would be no "profit." He denied that the experience with government ownership in other countries was evidence against his assumption. The plan does not provide for government operation, he said, because he thought operation would be more efficient under the system proposed. Asked about the application of the plan to other industries, Mr. Garretson said he believed that the employees were entitled to a voice in the management in any industry.

Mr. Sims got Mr. Garretson to admit very readily that the power of the government to issue tax-free bonds made it possible to market them at a lower interest rate than would otherwise be possible. Mr. Sims said that the first Liberty bonds issued at 3½ per cent are selling at near par, and thought this presented a great economic advantage.

"If the Government owned the railroads we wouldn't have any interests lobbying for higher rates and reduced taxes," said Mr. Sims.

"And I suppose we wouldn't have anybody lobbying to get their wages raised," added Mr. Montague.

No "Political Pull"

Mr. Garretson said the plan was intended to be "fixed so that no one would have any political pull," "but when it was suggested that there might be an opportunity for some political influence on the President regarding the appointment of directors, he said there should be a distinction between organized opposition to or influence for a man for political reasons and for other reasons. He said the opposition of railroad men to Mr. Hughes in 1916 was "an act of citizenship," not an act of railway employees, and that the brotherhoods had certain ideas and expressed them as to whom should be appointed director general after Mr. McAdoo's resignation, but that Mr. Hines was not the man they championed. It is understood that Commissioner McChord is the man referred to. Mr. Garretson insisted that there was nothing political about their action in that case. He added that he had nothing but the kindest feelings for Mr. Hines and the highest regard for his ability.

References to the political power of the employees impelled Mr. Garretson to make a statement regarding the occasion when Congress passed the Adamson law to head off a brotherhood strike. "The four brotherhoods in being forced into Congress on that occasion," he said, "were unwilling partici-

pants. Only the power and request of the President ever got us there. We went there on his demand to settle a question which we desired to settle in our own way. No Senator or Representative overheard a demand from any of the brotherhoods as to what they should do. I told them why I would not defer the strike, and after I had given my reasons no one asked me to."

Wage demands will come under any plan that has been proposed for dealing with the railroads, Mr. Garretson said, as long as wages do not keep pace with the increased cost of living. He declared that in 1913 the freight conductor received an average of \$4.10 per day and his rate is now \$5.40, an increase of 32 per cent as compared with an increase in the cost of living of 82 per cent. Representative Webster pointed out that these figures represent basic rates and asked what the average monthly pay check has been. Mr. Garretson avoided answering this question, but said that in 1913 the conductors probably averaged 100 miles per day for 30 days, or \$125.40 per month, whereas under the present rate the average on the same basis would be \$162, but he declined to give any figures for actual earnings.

Mr. Garretson said that the wage system is only one factor in the cost of living because if every man were given \$100 a day he would lose because of the percentage of profit on the cost of production exacted by capital. Limitation of profits, therefore, he insisted, is the only solution, because the fixing of wages unless the price of every commodity is also fixed, simply constitutes individual serfdom for the employees, whereas if prices are fixed without wages being fixed the financial interests would become the serfs.

Representative Sanders asked whether the final decision of the board of directors on the wage question would be binding on the employees. Mr. Garretson replied that it would be if they remained in service, but that their inalienable right to strike could not be taken away. However, he insisted that this would become of less importance under the plan, in which each man would be a partner in the enterprise. Asked if he thought there would be a profit on the first year's operations under the plan, Mr. Garretson said frankly that he doubted if there would be the first year, but he thought that by the second year the results of the practical working of the plan would be shown. Mr. Sanders insisted that with the prospect of a deficit the employees would have a far greater interest in the amount of their wages than in any possibility of a dividend, and he thought Mr. Plumb's suggestion that a deficit would be cause for forfeiture of the lease was not borne out by the provisions of the bill. Mr. Garretson insisted that the difference in the interest of the officers and the employees would be an effective check. Mr. Sanders asked if the labor organizations had any suggestions for legislation, in the event the Plumb plan is not accepted. Mr. Garretson replied that they were concentrating on this issue, and thought they had no program for any other legislation at this time.

Representative Watson made the point that the railroad employees have been able to save money to put into Liberty Bonds, but Mr. Garretson replied that every dollar came from the increase in wages they have received under Government control.

Referring to Representative Sims' repeated assertions that the ability of the Government to issue tax-free bonds at a low rate of interest and the elimination of the element of taxation from the cost of transportation represented a great economic advantage, Representative Webster asked Mr. Garretson if the expenses of government for which the taxes are now required would not have to be paid by somebody in some other way. Mr. Garretson seemed to think there would be some saving somewhere, but insisted that the saving in freight rates was of greater importance. Representative Webster also pointed out that there are probably 22,000,000 male adults in the United States, of which under the Plumb plan 20,000,000 would be represented by five members of the board of direc-

tors, while 2,000,000 would be represented by ten members. "Isn't your board a little one-sided?" he asked. Mr. Garretson replied with a trace of irritation that if it is one-sided it is time that the employees had their day in court after the other side had been in control for fifty centuries. Representative Barkley said at the rate of 1 per cent a year it would take 100 years to retire the capitalization of the roads even at Mr. Plumb's reduced valuation, and asked what would happen if the earnings were not sufficient to pay the 1 per cent into the sinking fund. Mr. Garretson replied that the surplus earnings would result in a more rapid extinction of the capitalization, but that it is unthinkable that if an operating deficit should grow sufficient to interfere with operation that the Interstate Commerce Commission would not increase rates.

Mr. Plumb's Charges

In opening his statement before the committee on August 7, Mr. Plumb said:

"During this week and since your honorable committee requested me to appear in order to present the case of organized labor with respect to its bill, there has come into the possession of the railroad brotherhoods and ten affiliated railway labor organizations a state of facts never spread before the American people or submitted to the jury of public opinion. These facts tend to show that the wrecking and looting of the New York, New Haven & Hartford, the Chicago & Alton, the Rock Island system, and the 'Frisco Lines are not sporadic examples of the highway robbery to which the American nation has been subjected as to its public transportation highways. Leading directly from Wall Street and from the banking houses controlled directly by the Morgan and Rockefeller groups, these facts show that there has proceeded a systematized plundering of virtually all of the transportation highways of the United States."

On August 12, after the completion of Mr. Garretson's testimony, Mr. Plumb presented his promised statement, in which the "new" and startling information had flattened out to the following stripped of some of the verbiage:

"That the property investment accounts of the railway lines are wholly unreliable.

"That in the five railway valuations first completed and published by the Interstate Commerce Commission the cost of reconstruction new, including the increased value of lands and real estate, is but 50 per cent. of the aggregate property investment accounts.

"That the nearly completed survey of the entire transportation area of the United States contained in the reports of the valuation division, so far as that work has now progressed, confirms the results disclosed by the valuation of these five roads.

"That where the cost of reproduction now approximates the investment account, it will be found in most instances that this approximation is due to the fact that vast expenditures have been made out of surplus and excessive earnings, expended on or ploughed into the property.

"That President Underwood of the Erie Railroad, in an interview recently given to the New York World, stated that the expense of operation under government control had been greatly increased by the employment for political purposes of unnecessary employees, and that this increase in payroll expense had been made for the purpose of building a political machine. I charge that investigation will disclose that if there has been wastefulness of money in swelling the payrolls, it has been at the instance of railway managements to make the expense account under government control appear extravagant and wasteful.

"That at the time the government took control of the operation of the railroads they were in such depleted condition as to maintenance and repairs of both roadbed and rolling stock that it has required hundreds of millions of dollars advanced

by the government to place them in effective operating condition. That in the making of such expenditures the railroads operated and controlled by men under the influence of Wall Street directorates have spent vast sums in unusual expenditures for maintenance and supplies; that such unusual expenditures have been made for the purpose of placing these properties in perfect operating condition and furnishing them with supplies for a long period of operation ahead, such supplies having been paid for out of government money at exorbitant prices.

"That the Interstate Commerce Commission was six years ago directed by Congress in the valuation act to ascertain and report the value of all aids, gifts and grants made to railway corporations. This work has not been done.

"That the records disclose that an area of land exceeding 190,000,000 acres, has been given by the United States Government and by the various state governments to railroads to aid in the construction of national highways; that of the grants made 113,000,000 acres had been patented and 35,000,000 acres had been forfeited prior to June 30, 1910, and that of the remainder the greater part is still available. That the values of the grants so made have either been appropriated to the private property of the railway promoters or capitalized.

"That from 1900 to 1910, the Chicago, Burlington & Quincy, the Chicago, Milwaukee & St. Paul, the Chicago & Northwestern, the Great Northern, the Illinois Central, and the Southern Pacific railroads gave away in bonuses to their stockholders more than \$250,000,000; that the actual dividend disbursements on this excess capital for the year 1913 alone, amounted to more than \$11,000,000.

"That from 1900 to 1910, 8 eastern railroads alone issued new stock for \$101,000,000 less than its market value, or gave away this enormous amount in bonuses to stockholders; that the dividends paid on these fictitious stock issues in 1913 alone amounted to over \$4,317,000.

"That during the same period 18 representative railroads operating in all parts of the United States as a whole, gave away stock bonuses aggregating \$450,414,000.

"That these railroads are now controlled in whole or in part by the Morgan interests, the Rockefeller interests, and the Gould interests; that this control is made manifest by the interlocking directorates of the financial institutions directed by these interests, who through their directorates control the operations of these railways.

"That in the attempt of these interests to secure the adoption of any plan whereby the property investment accounts of these railways shall be recognized by law as the basis for ratemaking they are conducting a political conspiracy to procure from this government a validation of all of the illegal acts heretofore consummated by these railroad corporations, and to make into a binding obligation upon the public the exploitation through which these public highways have passed under their direction and control.

"On behalf of all of the employees of these systems of transportation and the public, we demand that Congress shall make a due and thorough investigation of the charges herein set forth, so that the American people may know to what extent it is sought to subject them to exploitation under the plans proposed to this committee of Congress, plans which would make lawful the fixing of rates based on the now unlawful aggregate property investment accounts of these systems."

Chairman Esch, in a few brief questions, indicated a belief that most of the subject matter of the charges had been thoroughly investigated by the Interstate Commerce Commission and that to spend any further time on them would be to travel over old ground. No other member of the committee asked any questions.

Plans for protection of transportation from interruption through labor disputes were presented to the committee in

a statement by Stephen C. Mason, president of the National Association of Manufacturers.

Asserting that no program of railroad regulation is complete that does not protect the paramount public interest in uninterrupted transportation by rail, proposal was made that appropriate legislation be enacted to provide, first, whenever in the opinion of the President of the United States a dispute over hours, wages or working conditions threatens the interruption of a carrier essential to civil or military governmental needs or the free movement of commerce between the states or with foreign nations, he shall appoint a commission to investigate and decide upon the merits of the controversy, and until such finding is made any strike or lockout shall be unlawful; second, that, under the authority established by the decision of the Supreme Court in the Adamson case, whenever a labor dispute threatens the operation of an instrumentality of interstate commerce, the President shall have the power to appoint a commission which would write a contract for the parties in dispute, to be binding upon them until they reach a voluntary agreement by themselves, in which event their agreement would supersede that of the commission. Through this method, he said, freedom of contract would be left unimpaired unless and until the parties are unwilling or unable to agree, in which event the supreme interest of the public is asserted through its representatives.

The people of the country, Mr. Mason asserted, are now confronted with the proposition that they must either assent through their representatives, in social self-defense, to the control of Congress over commerce between the states or submit to its control and regulation by organized railway labor under the threat, by concerted action, of paralyzing that commerce upon which the life of the nation depends.

Urging that a declaration of a great constructive policy of transportation would clarify public thought and stimulate aggressive business activity, Mr. Mason asserted the belief of the members of the National Association of Manufacturers that the railroads should be returned to their owners; that Congress should, during the period of government administration, provide adequately for upkeep, betterment and expansion; that the rule of rate-making should be clearly defined by statute; that consolidation and co-operation among lines be authorized in the same manner as under present operation and administration; that the duties and functions of the Interstate Commerce Commission be modified and a Transportation Board be established.

It is the duty of Congress, he maintained, now to exert its full authority to define in the interest of the public the limits to which employers or employees, capital or labor, may go in threatening the facilities of commerce as a means of compelling the acceptance of economic demands or political policies.

National Grange Opposes Plumb Plan

Thomas C. Atkeson, Washington representative of the National Grange, has filed a statement with the House committee, saying in part:

"The National Grange is opposed to government ownership of the railroads, especially opposed to this plan, the so-called Plumb plan, which seeks not only to have the government acquire the railroads, but then turn them over to be operated by a management in which the men who draw wages will name two-thirds of the directors.

"If the railroad wage and salary workers can force this bill through Congress they can control the appointment of the other third of the management, and thus control it all. The government, or the public, will then pay the interest, the maintenance charges and whatever wages and rates are asked, as well as any deficit which may result.

"This matter is of such fundamental importance as a question of orderly government that I trust all farmers and farmer organizations, as well as all good citizens who respect

and appreciate our democratic form of government, will unite in opposition to this or any similar plan."

Plumb Plan Criticized in Congress

The Plumb plan, and more particularly the matter of its presentation, has aroused intense criticism in both houses of Congress and several speeches criticizing it most severely have been made. If any of the members of Congress are in favor of the plan they have been careful not to make the fact public within the last week. Representative Blanton of Texas, speaking in the House on August 8, declared that the brotherhoods caused the Adamson law to be passed by threats of strike, and are now repeating their threats to secure the adoption of the Plumb plan and another large increase in wages. This led to a general discussion of the events that led up to the passing of the Adamson law, in which several Representatives took the side of the brotherhoods in defending them against the charge that Congress was "held up" on that occasion, but they did not go so far as to say anything for the Plumb plan. Representative Black of Texas criticized the course of the brotherhoods on that occasion and declared himself in favor of a commission with full power to settle the differences which arise between the railroads and their employees.

In the Senate on August 11 Senator Myers of Montana declared that one of the greatest crises that ever confronted the people of the United States now confronts them. "I am not in favor of any increase in wages for railroad employees at this time," he said. "The railroads are being operated by the government at a tremendous loss and I think under those circumstances it would be wholly unjustifiable to increase the pay of railroad employees. That demand is also accompanied simultaneously with a demand that the industries of this country be sovietized and a vast propaganda has been started to back up this demand. It is also accompanied by threats of revolution, of force and of serious and dire disaster to the people if the demand is not granted by Congress. The Plumb plan is simply a bold, bald, naked attempt to sovietize the railroads of this country. If the railroads were sovietized it would merely be an entering wedge to conducting the industries of this country for the benefit of a favored few. The employees would fix their own wages; they would have the power to fix rates for passenger travel, to fix all freight rates and to regulate the amount of money to be taken from the people for the operation of the railroads. They would be absolute monarchs. The American public would be thoroughly Russianized. I am sorry to say it falls to the leaders of the railroad brotherhoods to present to the people of this country a concrete test of Bolshevism against Americanism."

Heat Treatment As Applied To Railway Materials*

By C. B. Bronson

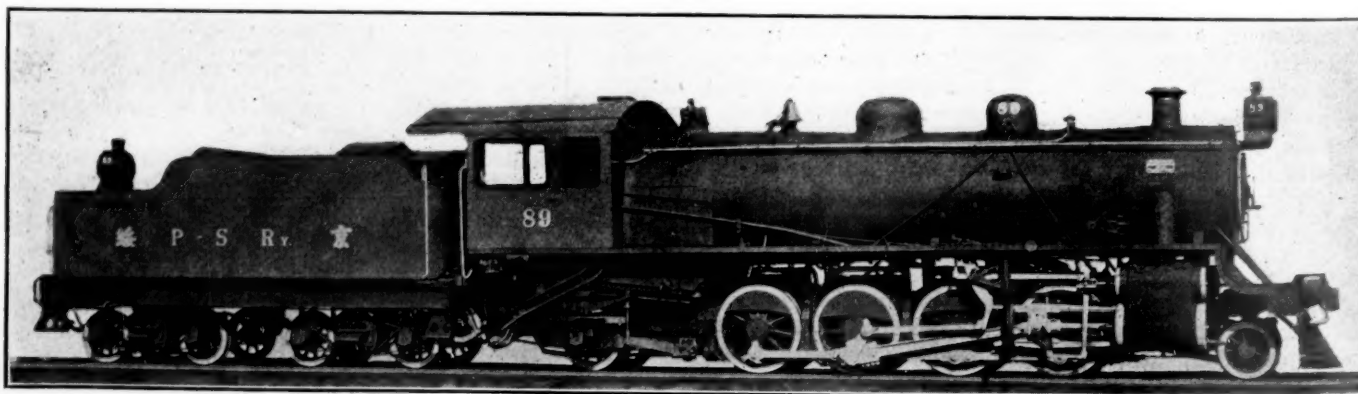
THE RAPID PROGRESS and advancement made in the science of heat treatment of steel during the war and subsequent thereto is of especial interest to railway officers, engineers and investigators. The knowledge gained from the recent developments in this art will be valuable to metallurgists and engineers in the design, specifications and treatment of steel for superior service. Railway people must search constantly for the highest grade of steel to meet the increasing demands of traffic and operation, which necessitates larger structures, larger power units, and high speeds.

The fundamental basis for successful heat treatment is sound steel. This implies not only structural soundness and freedom from blow holes, pipes, and inclusions, but chemical and physical homogeneity as well. Perhaps this seems axiomatic to all of us, yet a number of violations are frequently encountered, when investigations are made of service failures. Heat treatment of unsound steel probably does more harm than good, for even the best steel is put to a severe test during the quenching operation, while unsound or segregated metal may be easily fractured or weakened. Much discussion has appeared recently on the "notch effect" in rotating shafts and other parts, which brings out the fact that internal or external defects are in effect notches, or potential sources of failure, and may develop into such after a relatively short period of service. The question of soundness in steel cannot be too strongly emphasized.

Of the great number of steel materials used on railroads, perhaps none has been more widely discussed than the rail. The development of the rail section is an intensely interesting story of evolution and improvement, and it is therefore only natural that many researches have been conducted to improve its quality by heat treatment. Most of the work attempted has been experimental in nature on short length pieces, and not on full length rails. Many influences have retarded development of the latter, chief of which is the outlay and expenditure required to produce large tonnages, especially when it is recalled that present rail mills produce from one to three thousand tons of untreated rails daily. Furthermore, there is the question of higher cost, as well as the relative efficiency and reliability of treated versus untreated rails.

Probably for general service requirements, where properly designed sections are used, it will be a long time before the

*Abstracted from a paper presented at the June meeting of the New York chapter, American Steel Treating Society.



Mikado Locomotive Recently Built by the American Locomotive Company for the Pekin-Kalgan Railway of China

This locomotive has 20 by 28 in. cylinders; a weight on drivers of 139,000; a total weight in working order, engine only, of 187,500 lb.; a tractive effort of 34,300 lb. It is of standard gage and is superheated.

present efficient plain carbon basic open hearth steel rails will be replaced as standard for most of the roads in this country. Basic open hearth rail, under our present elongation and exhausted ductility test, making it possible to obtain nearly all the ductility due to the chemical composition, is a wonderfully efficient product with a low rate of failure, and moderate rate of wear.

The simplest process for heat treatment of rail steel, of course, is the air-cooling method introduced by one manufacturer. This consists of an air blast blown from numerous small openings in a straight pipe, and directed against the top surface of the rail head; the blast being maintained for about two minutes, after which the rail is allowed to anneal in air. The head surface metal becomes sorbitic for a depth of about one inch, and shows a Brinnell hardness of 300-350; elastic limit, 90,000 lb.; tensile strength, 140,000 lb.; and 8 per cent elongation. The balance of the head metal is pearlitic in structure with a Brinnell hardness of 240; elastic limit, 60,000 lb.; tensile strength, 125,000 lb.; and 10 per cent elongation. The carbon runs from 0.50 to 0.65 in this steel which is made from Mayari ores.

A number of patents have been issued to one company covering a combined oil and water treatment. The treatment consists in passing the finished hot rails, head down, into a series of quenching vats so constructed and regulated that the head only is treated in the first oil bath; passing them to the second vat where the head is immersed in water and the web in oil. In the third vat, both head and web are in water which completes the treatment. One modification of the process provides a spray to force the water against the rail head, instead of merely drawing it through the bath. A troostitic structure is obtained on three sides of the head, which tapers off into martensite for the balance of the head section. Drop and hammer tests on rails so treated indicate great toughness and ability to withstand severe shocks without failure.

The composition, and physical properties obtained after treatment are about as follows:

Carbon	0.40	Tensile strength	190,000 lb.
Manganese	0.50	Elongation—2 in.	11 per cent
Silicon	0.25	Red. of area	30 per cent
Sulphur—max.	0.04	Brinnell—head	420 per cent
Phosphorus—max.	0.04	Brinnell—web and flange ..	200 per cent
Elastic limit	120,000 lb.		

One manufacturer found it necessary to redesign the standard section to heat-treat successfully rails made of Mayari steel. A section, similar to the present "B" type 100-lb. rail was used as a basis, and to this was added 21 lb. by providing very generous fillets between head, web and base and also increasing the thickness of the latter. The mechanical properties were apparently not given precedence in the design, as they are low for this weight of rail. The design was adopted to obtain uniform physical properties, provide relief and reduction of cooling stresses, and to utilize a set of rolls which were on hand.

The treatment used was experimental, and therefore the details are not generally known.

The composition and physical properties obtained after treatment were as follows:

Carbon	0.33	Elastic limit	115,000 lb.
Manganese	0.33	Tensile strength	140,000 lb.
Nickel	1.30	Elongation—2 in.	8 per cent
Chromium	0.50	Red. of area	15 per cent

Under the drop the test pieces withstood from 6 to 12 blows before fracture, when a 2,000-lb. tup was dropped 25 ft. on supports 3 ft. apart.

One or two of the eastern roads with very heavy traffic conditions secured several of these rails, and will probably be in a position in the very near future to report upon the success of the experiment.

The only alloy heat treated rails which have been made and purchased in large numbers are manganese steel rails.

Those of early manufacture developed breakages with great frequency but this difficulty has since been overcome as a number of changes in manufacture were introduced. The New York Central purchased several hundred tons of these rails four years ago, and since that time they have carried over 100,000,000 tons of traffic without one failure and at a remarkably low rate of wear—an exceptionally good record. From present indications, they should outlast plain carbon steel rails in the ratio of ten to one.

The wonderful toughness inherent in manganese steel makes its use particularly inviting for rails on curves. Our present practice is to place them on the high side of curves with plain carbon rails opposite, generally reversed, curve worn high rails which make the best combination. The susceptibility to flow prohibits their use on the low side of curves, especially where the tendency to widen and flatten under the wheels of present improper contour is very great.

The 6-in., 105-lb. Dudley type rail is the only one which the New York Central has had rolled in manganese steel. This is a broad head, stiff section, possessing high mechanical properties which are necessary when using metal with such low elastic limits. Any road contemplating the purchase of manganese rails is advised against ordering them rolled in light sections, for the combination of the low elastic limit and deficient mechanical properties make it easy for them to acquire permanent sets in service, creating rough riding track, and may eventually be the cause of derailments. Manganese rails injured by truck derailments from causes other than roughness of track, are badly bent out of shape, although they remain unbroken. It is necessary to scrap the rails, as they can not be straightened by any known method.

The manufacture of manganese rails calls for several departures from the ordinary practice in the mill. Hot tops must be placed on the ingot molds to reduce the pipe and fill the cavity due to shrinkage, while great care is required in heating and soaking the ingots in the pits for proper rolling. The rails are rolled in the usual manner, and after sawing, are quenched at 1050 deg. C. by plunging them immediately into a cold water bath. They are then drawn through the bath by means of dogs on endless chains. The quenching is necessary for suppressing the transformation range, and to retain the structure in the austenitic condition, as otherwise the rails would be as brittle as glass.

The composition specified for rail steel is as follows:

Carbon	1.00 to 1.35	Phosphorus, max.	0.10
Manganese	10.50 to 15.00	Sulphur	Not specified

Tests for the physical properties are made by the usual drop test; the toughness and tenacity of the material being so great that several blows of the 2,000-lb. tup falling 20 ft. are required to exhaust the ductility, which frequently runs as high as 25 to 30 per cent per in. A load deflection test is made upon a full length rail supported at the ends and loaded by means of a scale pan at the center. Elastic limits found in this manner are close to 35,000 lb. per sq. in., which is a more reliable index than can be secured from tensile test specimens burned out of the rail section and ground to size. The results are always high by the latter method and therefore are not used.

The return of normal conditions should see an increasing amount of manganese steel rails placed in service, for there is no question about their superiority for overcoming curve wear to which our present rails quickly succumb.

It is well to mention, in passing, the successful use of manganese steel for frogs, crossings, and switch point tips. Their resistance to wear is similar to that of manganese rails, and they are used quite extensively. The tendency to breakage, however, is somewhat greater in the cast steel parts than for rolled rails.

Two heat treated track materials purchased in large quan-

ties, are rail splice bars, and track bolts. Splice bars are made to the following chemical and physical requirements:

Carbon	0.45 to 0.55	Elastic limit.....	65,000 to 72,000
Manganese	0.30 to 0.50	Elong. in 2 in.....	12 per cent min.
Phosphorus, max.....	0.04		

In manufacture, the bars are sheared to length, reheated to about 800 deg. C., hot punched and quenched at 700 deg. C., or over, then subsequently reheated or withdrawn from the oil bath for tempering. The high elastic limits obtained place them on the same level as rail steel so far as physical strength is concerned, and increase their resistance against permanent sets, and sagging at the joints.

Track bolts when heat-treated show elastic limits of 70,000 lb. and over when made of about 0.30 carbon steel. These high limits provide additional strength against stretching when tightened with the trackman's wrench, and becoming loose due to the transmission of stress at the rail ends, and the impacts from wheel loads. The usual process for heat treating consists in rolling the threads hot, then allowing the bolts to drop into a bath of oil and finally discharged into a hopper from an endless chain. Heat treated bolts are in extensive use and giving satisfactory service.

Orders of the Regional Directors

TWO-DAY-FREE-PER-DIEM-ALLOWANCE. — Circular 235 of the Southwestern regional director contains regulations covering the free-time allowance in the freight-car clause (section 6) of the Short Line contract.

Capital Expenditures for Replacing Fire Losses.—Circular 237 of the Southwestern regional director states that as only the smaller railroad structures destroyed by fire can be rebuilt before January 1, 1920, it does not seem necessary to rebuild or restore any buildings so destroyed, except where necessary for safety or the protection of the public; or where delay in restoration might work a serious hardship upon employees. In each case in which it is determined that one or more of the above conditions will require rebuilding or restoration, the proper form should be submitted to the regional director's office for any capital expenditure in excess of \$1,000. If it is decided not to rebuild or restore the building, the procedure should be in accordance with the fourth paragraph of the director general's Circular 67 of December 5, 1918.

Embargo Notices.—The Southwestern regional director in Order 229 instructs that in cases where cars are partially loaded, but bill-of-lading has not yet been signed, at the time the agent receives notice of an embargo, shippers are to be permitted to complete the loading. The agent will forward these cars, making suitable notation on the way-bills.

Use of Telegraph Wires by Express Agents.—Circular 236 of the Southwestern regional director, canceling Circular 205 deals with Article 14 of the Agreement with the American Railway Express Company, concerning telegraph and telephone messages. Where the telegraph lines are operated by the railroads the messages of the express company can properly be transmitted without charge, as provided in the agreement; but it is not proper for an agent of the express company at a point on one railroad to send a message over railroad wires to a representative at a point on a second railroad, the word "railroad" meaning any road operated as a unit under the supervision of a single federal manager.

Numbering Railroad Messages.—The Southwestern regional director in Order 228 prescribes a method of numbering messages sent over railroad wires:

1. Allow one number for the first three lines of messages and an extra number for each three additional lines, the address and signature not to be counted. If a message contains six lines, two numbers should be allowed; if a message contains eleven lines, four numbers, etc. Joint messages

addressed to two or more persons are to be allotted numbers as if they were separate messages.

2. The preceding rule is based on a typewritten message and assumes ten words per line. In other words, it is proposed to have one number for each thirty words.

3. In counting figures the same general plan should be followed. In the case of irregular forms where figures are not conveniently arranged in lines, the assumption of five figures per word will be satisfactory. In case an operator is spending considerable periods of time in sending and receiving forms, the assumption of forty numbers per hour will be satisfactory.

Freight Car Distribution—Circular 27.—The Southwestern regional director in Circular 234 states that the provisions of Division of Operation Circular 27 with respect to returning cars to owners for repairs appear to have been more broadly construed than was intended. Cars have been sent long distances home for comparatively light repairs. The purpose of this circular was to put into effect former M. C. B. requirements for the return of cars to owning lines for repairs and in addition the circular was intended to provide a means for the owners to get their cars home when desired for rebuilding or for the application of betterments. It was not desired that the cars should be sent home involving an intermediate line haul except for "rebuilding or for the application of betterments" as provided in paragraph C of the circular, in which case arrangements should be made for this movement in accordance with paragraph 6.

Roadmasters' Convention.—A. T. Hardin, regional director, Eastern region, by Circular 102-42, promulgates a letter from the director of the Division of Operation recommending that members of the Roadmasters' and Maintenance of Way Association be allowed to attend the convention of the association, at Chicago, September 16-19, so far as practicable. Roadmasters and supervisors who are not members may also be encouraged to go, where that is their wish and they can be spared. Some of the higher officers of the maintenance of way department might also attend with profit. Men who attend the convention should take notes so as to report their observations when they return home.

Transportation of Liquors.—The regional director, Eastern region, by circular 600-190, supplements previous instructions regarding the transportation of intoxicating beverages, with advice that such goods may be legally transported from one bonded warehouse to another; in such cases the liquor remains in the custody of the government; the Internal Revenue Department will not release liquors for unlawful purposes.

Passenger Traffic on Labor Day.—A. T. Hardin, regional director, Eastern region, by circular 1600-204, promulgates instructions from the director of the Division of Traffic reminding federal managers to take all suitable measures for moving a large passenger traffic on Labor Day. Special care must be taken in handling baggage as many families will be returning from the summer resorts. It is not expected that troop movements will interfere materially with Labor Day traffic.

Color of Locomotives. "Speaking of Chinese railroads reminds me of the failure of an American manufacturer to obtain a contract for locomotives because his European competitors made a more careful study of Chinese peculiarities," writes Lynn W. Meekins in the Scientific American. "One locomotive was ordered from each of the competing companies. In every respect save one the American product was unmistakably superior. However, it had been painted black before shipment from the works, and on the way across the Pacific it became more or less rusted. Its appearance, therefore, was far less attractive than that of the European locomotives, which were painted in accordance with Chinese preference, and had been touched up by the manufacturers' agents after arriving in China. Don't get your colors mixed if you want to sell goods to the Chinese."

Carolina, Clinchfield & Ohio Freight Locomotives

Built to the Roads' Specifications, Permitting the Use of
Exceptionally Liberal Clearances

DURING THE EARLY part of the summer, the Carolina, Clinchfield & Ohio received eight heavy 2-8-2 type locomotives and seven heavy 2-8-8-2 type Mallet locomotives from the Baldwin Locomotive Works. The order for these locomotives was placed with the builders in the spring of 1917 and they have been built to specifications prepared by the railroad company.

The Mikado type locomotives are for use in handling the heavy merchandise business from Elkhorn City, Ky., to Spartanburg, S. C., and have proved highly satisfactory in this service. The character of the Carolina, Clinchfield & Ohio, with its long easy grade, provides ideal conditions for the operation of Mallet type locomotives and heavy tonnage trains and the new Mallets are handling coal traffic originating at the mines of Virginia for delivery to the railroads and industries of the south.

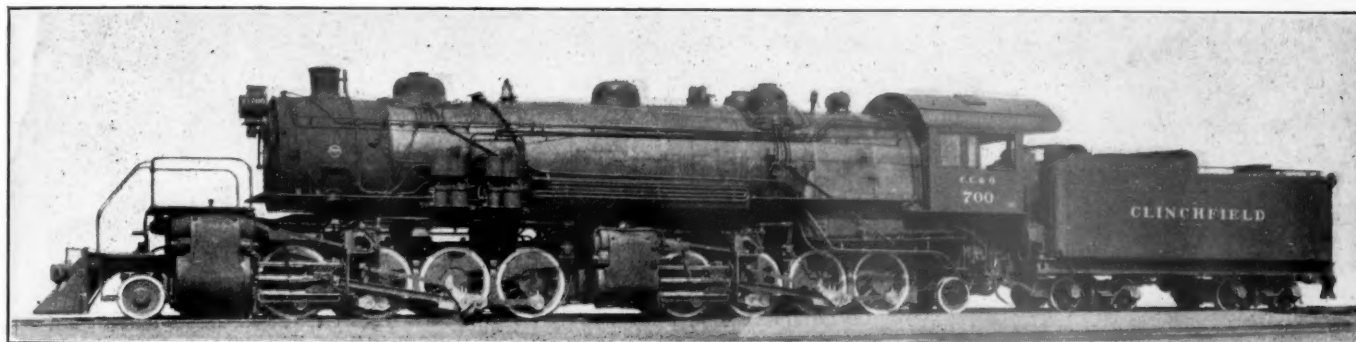
On account of the generous clearances which were pro-

Cyl's, dia. and stroke, in.....	27 by 30	27 by 32	28 and 42 by 32	25 and 39 by 32
Diameter of drivers, in.....	63	63	57	57
Boiler pressure, lb. per sq. in.	190	190	200	240
Evaporating heating surface, sq. ft.	4,128	4,297	6,125	6,120
Superheating surface, sq. ft.	1,035	993	1,510	1,475
Grate area, sq. ft.	78	70.8	96	96
Weight on drivers ÷ tractive effort	4.1	4.0	4.5*	4.7*
Tractive effort × dia drivers ÷ equiv. heat. surface.....	621.0	653.2	704.0*	695.0*
Equiv. heat. surface ÷ grate area	72.8	81.7	87.5	86.6

* Baldwin Locomotive Works' formula for tractive effort.

† American Locomotive Company's formula for tractive effort.

The Mallet locomotive has a tractive effort about 2,000 lb. greater than the U. S. R. A. heavy Mallet type, with a weight in working order of 523,600 lb. and 467,000 lb. on the drivers, these weights being 4,700 lb. and 11,000 lb. less respectively than the weights of the standard locomotive. The cylinders are 28 in. and 42 in. in diameter by 32 in. stroke,



C. C. & O. 2-8-8-2 Type Locomotive

vided when this line was built, it has been possible to employ large limiting dimensions in the design of these locomotives. For the Mikado type the clearance width is 11 ft., while for the Mallet type locomotives the clearance width is 11 ft. 6 in., and the maximum height for both designs is 16 ft. 8 in. The liberal width clearance has allowed considerable latitude in the design of details to avoid cramping on both locomotives and on the Mallet type has permitted the use of low-pressure cylinders of sufficient size to prevent the necessity of using a high boiler pressure. On the Mikado type the spread of the cylinders is 91 in., while on the Mallet type it is 90 in., in both cases permitting the design of crankpins of good proportions.

The Mikado type locomotive, which develops a tractive effort of 56,000 lb., has a total weight of 311,400 lb., of which 230,000 lb. is on the drivers. The cylinders are 27 in. in diameter, and have a stroke of 30 in. Reference to the table comparing the C. C. & O. locomotives with the Railroad Administration designs of the same type shows that the Mikado type has 4,000 lb. less tractive effort than the Standard heavy Mikado and has 13,600 lb. less weight in working order. The reduction in tractive effort is due to the shorter piston stroke of 30 in.

	COMPARISON OF C. C. & O. AND U. S. R. A. LOCOMOTIVES			
	Mikado		Mallet	
	C. C. & O.	U. S. R. A.	C. C. & O.	U. S. R. A.
Tractive effort, lb.....	56,000	60,000	103,560*	101,570*
Weight, total, lb.....	311,400	325,000	523,600	531,000
Weight on drivers, lb.....	230,000	240,900	467,000	478,000

and the boiler carries a working pressure of 200 lb. per sq. in. as compared with the smaller cylinders and boiler pressure of 240 lb. used on the standard locomotive.

The boilers of the Mikado locomotives are of the straight type with three barrel courses, telescopically arranged, with an outside diameter at the front course of 82 in. The firebox has a throat-sheet approximately 2 ft. deep below the forward end of the arch tubes. The tubes and flues are 21 ft. long and no combustion chamber is included. Comparing the boiler with that of the standard heavy Mikado type, it will be found that a larger grate area has been obtained by designing the firebox approximately 12 in. wider. On the other hand the number of tubes is 38 less and they are two feet longer, while the firebox heating surface is reduced by the omission of a combustion chamber. The net result is a reduction in total heating surface, as shown in the table, and a less effective heating surface distribution on the basis of the principles most generally accepted in boiler design.

The boiler of the Mallet type locomotive is of the conical type with a diameter outside of the first ring of 90 in. The boilers of these locomotives have a firebox 144 in. long, and a barrel combustion chamber extends forward 66 in. from the throat-sheet. The tubes and flues are 24 ft. long. The boilers of these locomotives are quite closely comparable in their proportions with those of the standard Mallet type locomotives.

On both types of C. C. & O. locomotives the inside fireboxes are welded throughout, no riveted joints being employed. The joints are butt welds located on the straight por-

tions of the sheets well back from the corners. The tubes and flues are also welded in the back tube sheets. All of the locomotives are equipped with Duplex stokers and Franklin grate shakers.

Both types of locomotives have vanadium cast steel frames and heat-treated, hollow-bored axles. The journals are the same on both types, the main having a diameter 11½ in. while the others are 11 in. in diameter. They are all 13 in. in length. The Mikado locomotive is equipped with the Commonwealth rear cradle casting and the K. W. trailing truck. The frames of the two units on the Mallet type are fitted with the Baldwin flexible type articulated connection.

They are equipped with Baker valve gears, controlled on the Mallet locomotives with the Ragonnet power reverse gear, and on the Mikado locomotive with the Lewis power reverse gear. The Mallet locomotives are equipped with reducing and intercepting valves and have auxiliary high-pressure ex-

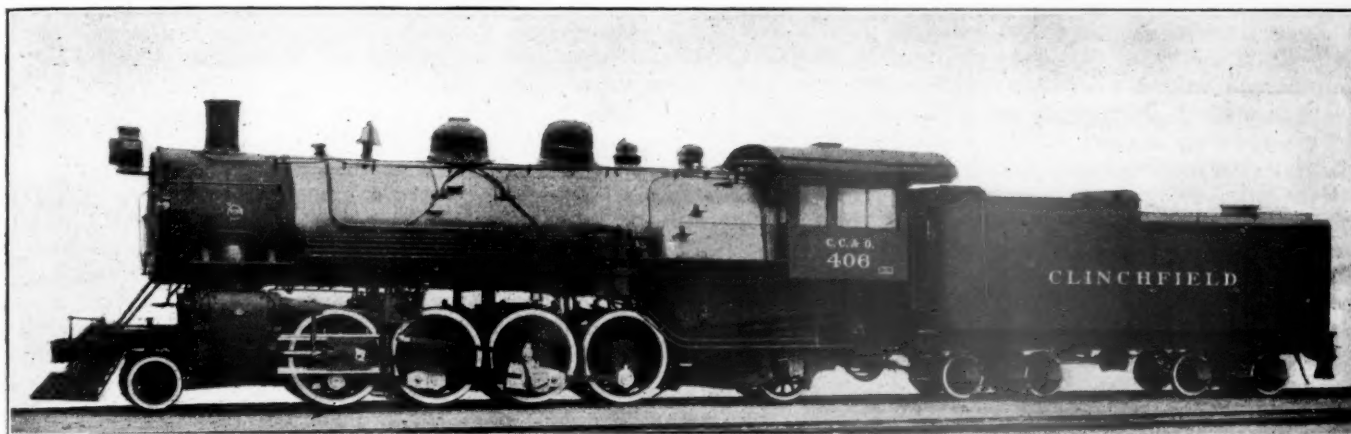
Driving journals, others, diameter and length 11 in. by 13 in.
Engine truck wheels, diameter 33 in.
Engine truck, journals 6½ in. by 12 in.
Trailing truck wheels, diameter 45 in.
Trailing truck, journals 8 in. by 14 in. 6½ in. by 12 in.

Boiler

Style	Straight	Con. wag. top
Working pressure	190 lb. per sq. in.	200 lb. per sq. in.
Outside diameter of first ring.....	82 in.	90 in.
Firebox, length and width.....	117 in. by 96 in.	144 in. by 96 in.
Tubes, number and outside diameter...	209—2¼ in.	274—2¼ in.
Flues, number and outside diameter...	42—5½ in.	53—5½ in.
Tubes and flues, length.....	21 ft.	24 ft.
Heating surface, tubes and flues....	3,845 sq. ft.	5,685 sq. ft.
Heating surface, firebox, including arch tubes	283 sq. ft.	440 sq. ft.
Heating surface, total.....	4,128 sq. ft.	6,125 sq. ft.
Superheater heating surface.....	1,035 sq. ft.	1,510 sq. ft.
Equivalent heating surface.....	5,680 sq. ft.	8,390 sq. ft.
Grate area	78 sq. ft.	96 sq. ft.

Tender

Tank	Water bottom	Water bottom
Frame	Struct. steel	Struct. steel
Weight	178,600 lb.	180,400 lb.



Mikado Type Locomotive Built for the C. C. & O.

haust nozzles discharging into the stack. Both locomotives are fitted with outside connected throttles.

The principal data and dimensions of the two types are as follows:

General Data

	Mikado	Mallet
Gage	4 ft. 8½ in.	4 ft. 8½ in.
Service	Freight	Freight
Fuel	Bit. coal	Bit. coal
Tractive effort	56,000 lb.	103,560 lb.**
Weight in working order.....	311,400 lb.	111,300 lb.†
Weight on drivers.....	230,000 lb.	523,600 lb.
Weight on leading truck.....	28,400 lb.	467,000 lb.
Weight on trailing truck.....	53,000 lb.	28,000 lb.
Weight of engine and tender in working order.....	490,000 lb.	28,600 lb.
Wheel base, driving.....	16 ft. 6 in.	704,000 lb.
Wheel base, rigid.....	16 ft. 6 in.	42 ft.
Wheel base, total.....	35 ft. 8 in.	15 ft. 6 in.
Wheel base, engine and tender.....	67 ft.	57 ft. 4 in.
		85 ft.

Ratios

Weight on drivers ÷ tractive effort..	4.1	4.5**
Total weight ÷ tractive effort.....	5.6	5.1**
Tractive effort × diam. drivers ÷ equivalent heating surface*.....	621.0	704.0**
Equivalent heating surface* ÷ grate area	72.8	87.5
Firebox heating surface ÷ equivalent heating surface* per cent.....	5.0	5.3
Weight on drivers ÷ equivalent heating surface*.....	40.5	55.5
Total weight ÷ equivalent heating surface*.....	54.8	62.7
Volume equivalent simple cylinder.....	19.9 cu. ft.	31.6 cu. ft.
Equivalent heating surface* ÷ vol. cylinders	285.4	265.8
Grate area ÷ vol. cylinders.....	3.9	3.0

Cylinders

Kind	Simple	Compound
Diameter and stroke.....	27 in. by 30 in.	28 in. and 42 in. by 32 in.

Valves

Kind	Piston	Piston
Diameter	15 in.	15 in. and 17 in.

Wheels

Driving, diameter over tires.....	63 in.	57 in.
Driving journals, main, diameter and length	11½ in. by 13 in.	11½ in. by 13 in.

Water capacity	10,000 gal.	10,000 gal.
Coal capacity	15 tons	15 tons

*Equivalent heating surface = total evaporative heating surface + 1.5 times the superheating surface.

**Baldwin Locomotive Works' tractive effort formula.

†American Locomotive Company's tractive effort formula.

Misfits Under State Control.—In a very large concern, as any state-controlled undertaking is bound to be, it is exceedingly difficult to prevent square men from being forced into round holes. Certain positions are paid at certain rates based originally on the relative importance of each position. In course of time this pay became stereotyped, and cannot well be altered without dislocating the whole machine. What are the consequences? Owing to long and faithful service in one department in which he has become singularly efficient, a man is entitled to better pay; owing, however, to there being no vacancy in his department he cannot be advanced therein. In some other department, more or less (often less) in touch with his office, there happens to be a vacancy which, if he be appointed to it, would give him the extra emoluments to which he is justly entitled. It therefore saves the higher authorities much trouble and worry to fill the vacancy accordingly, although the newcomer is absolutely strange to the work. This occurs even in the Army, and the action vulgarly called "kicking a man upstairs" is often the only way to remove a man from a position in which he has been an utter failure—or to give his duty to another man who has well earned it. It is, indeed, difficult to see how this necessary evil can be avoided entirely, although gross cases might often be avoided by a little more tact, or by taking of a little more trouble in assorting. Favoritism and nepotism, also, are all too often to blame in these matters.—*Railway Gazette, London.*

Railroad Administration to Consider Wage Demands

Shop Employees Gradually Return to Work and Other Organizations Prepare Specific Proposals

WASHINGTON, D. C.

THE NEW CYCLE of general advances in railroad wages seems to have been definitely opened.

The committee of 100 representing the six shop craft unions comprised in the Railway Employees' Department of the American Federation of Labor was expected to resume negotiations this week with Director General Hines and his assistants in the Railroad Administration on their demands for increased wages on which the Board of Railroad Wages and Working Conditions on July 16 submitted to Mr. Hines a divided report. Large numbers of the shop employees had gone on strike on August 1 and following days because Mr. Hines had not rendered a decision on their demands, but instead had written a letter to the President recommending legislation for the creation of a special wage tribunal. They returned to work gradually after the President had instructed Mr. Hines to deal with them only on condition they called off the unauthorized strike.

The Railroad Administration is now confronted also with a general demand by all of the 14 organizations of railroad employees for increases in pay "to at least re-establish the pre-war purchasing power of their wage," but the specific demands have in most cases not yet been presented. The case of the shop employees was fully heard by the wage board during March and April, and is now before the director general for decision, the three labor members of the board having recommended an increase from 68 to 80 cents an hour for the principal classes and the three official members having recommended no increase at this time. The demands of the Brotherhood of Railroad Trainmen have also been given their hearing before the board.

The Brotherhood of Railway Clerks, Freight Handlers, Station, Express and Steamship Employees, claiming to represent 450,000 men, had announced through its president, J. J. Forrester, that strike votes would be sent out at once to enforce its demand for an increase of 20 cents an hour and a 44-hour week.

Mr. Hines has estimated that to grant the increases recommended by the shop employees would require a general increase to all employees that would amount to approximately \$800,000,000 a year on the same basis. Neither he nor the President has indicated definitely the extent by which it is proposed to meet the resulting increase in expenses from rates or by a request for a further Congressional appropriation. It has been estimated in the Railroad Administration that without any further increases in rates the situation called for at least a 10 per cent increase in rates and an addition of \$800,000,000 a year to expenses would amount to an additional 23 per cent in freight revenues. The employees have suggested that the increased wages be paid for first by an appropriation pending an investigation by the rate-making body as to what increases, if any, should be made in rates.

Strikers Ordered Back to Work

Congress having declined to take from President Wilson and Director General Hines the responsibility for dealing with the wage demands being pressed by the organized railroad employees, the President on August 7 directed Mr. Hines to take up and consider on their merits the demands of the shop employees as soon as they should recognize the authority of their central officers and return to work. Mr. Hines thereupon addressed a letter to B. M. Jewell, acting president of the Railway Employees' Department of the American Federation of Labor, enclosing a copy of the President's letter and

saying: "It is obvious that it is of the highest importance, not only in the interest of the public, but in the interest of the employees themselves, that they shall immediately return to work. The situation having been clarified by the definite indication that Congress does not wish to take action in the premises, the Railroad Administration stands ready to take up the wage question on its merits with the duly accredited international officers and their authorized committee as soon as the employees return to work."

About midnight Mr. Jewell sent a message to the officers and members of the six shop craft unions ordering those out on strike to return to work and saying that the failure of the membership to comply with his instructions would have a detrimental effect on the entire labor movement.

Senate Committee Says President

Has Plenary Authority

As stated briefly in last week's issue, the Senate committee on interstate commerce at its meeting on August 6 had decided not to accept the President's recommendation for the creation of a special wage tribunal and authorized Chairman Cummins to write a letter to the President, saying he already had full authority. This action was unanimous, representing the opinions of the Democrats and Republicans alike. The letter was delivered to the President on the following day. Senator Cummins said the committee recognized the gravity of the situation and desired to co-operate in bringing about the proper solution, but felt that Congress has already given the President "complete and plenary authority, and that additional legislation could add nothing to his power in the premises. The letter continued.

"The director general can fix the wages of all men employed in the transportation service, and it seems to be clear that it is for him to say whether the compensation of these men should or should not be increased. He has all the available information which can possibly be secured, and it is the view of the committee that he should act in accordance with the public interest and his own judgment. He can be advised upon the subject by any board or tribunal which you may select for that purpose.

"The director general has also the absolute right to initiate rates for transportation and can advance or lower them as he may think necessary or wise to meet the requirements of the transportation systems in his charge, and, moreover, he can put the new rates into effect whenever, in his judgment, they should become effective.

"At the present time the Interstate Commerce Commission has not the authority to suspend for examination or approval the rates initiated by the director general; but even if the act which lately passed the Senate and which has not yet passed the House shall become a law and the authority of the Interstate Commerce Commission to suspend rates be restored, it will still be true that the director general must initiate the rates and it is entirely impossible to believe that the commission would suspend rates that are necessary in order to pay any increased wages of railway operatives.

"The committee is now diligently engaged in the preparation of a bill for the general reorganization of our system of regulation and control. One common phase of the many plans which have been submitted relates to the further direction which ought to be given to the Interstate Commerce Commission for its guidance in determining the reasonableness of rates. Upon that phase of the subject diverse opinions have

been developed, and it is thought to be unwise to bring forward for action by Congress any further legislation in that respect until it can be associated with the general plan of reorganization.

"If the committee felt that there was any lack of power on your part or on the part of the director general it would be quick to act; but inasmuch as it can perceive no want of authority, it has reached the conclusion that no additional legislation is required to meet the particular emergency which you have pointed out."

Action on the part of the President came later in the day, when Mr. Hines called at the White House and informed him regarding the number of men that had gone on strike regardless of the instructions of the officers of their national organization in Washington and showed him the statement signed by the 14 railroad labor organizations which he had received on August 4. The House had taken no action on the President's recommendations pending receipt of a draft of a bill which Mr. Hines was having prepared, but President Wilson accepted the decision of the Senate committee as final and wrote Mr. Hines a letter saying that Senator Cummins' letter had set him free to deal as he thought best with the wage question.

"I thought it my duty to lay the question in its present pressing form before the committee of the Senate," he said, "because I thought that I should not act upon this matter within the brief interval of Government control remaining, without their acquiescence and approval. Senator Cummins' letter, which speaks the unanimous judgment of the committee, leaves me free and indeed imposes upon me the duty to act."

The letter then referred to the proceedings before the Board of Railroad Wages and Working Conditions, saying: "The board having now apprised us of its inability, at any rate for the time being, to agree upon recommendations, it is clearly our duty to proceed with the matter in the hope of disposing of it."

"You are therefore authorized to say to the railroad shop employees that the question of wages they have raised will be taken up and considered on its merits by the director general in conference with their duly accredited representatives. I hope that you will make it clear to the men concerned that the Railroad Administration cannot deal with problems of this sort, or with any problems affecting the men, except through the duly chosen international officers of the regularly constituted organizations and their authorized committee. Matters of so various a nature and affecting so many men cannot be dealt with except in this way. Any action which brings the authority of the authorized representatives of the organizations into question or discredits it must interfere with, if not prevent action altogether. The chief obstacle to a decision has been created by the men themselves. They have gone out on strike and repudiated the authority of their officers at the very moment when they were urging action in regard to their interests.

"You will remember that a conference between yourself and the authorized representatives of the men was arranged, at the instance of these representatives, for July 26 to discuss the wage question and the question of a national agreement, but before this conference took place or could take place, local bodies of railway shopmen took action looking toward a strike on the first of August. As a result of this action, various strikes actually took place before there was an opportunity to act in a satisfactory or conclusive way with respect to the wages. In the presence of these strikes and the repudiation of the authority of the representatives of the organization concerned, there can be no consideration of the matter in controversy. Until the employees return to work and again recognize the authority of their own organizations, the whole matter must be at a stand still.

"When federal control of the railroads began, the Rail-

road Administration accepted existing agreements between the shopmen's organizations and the several railroad companies, and by agreement machinery was created for handling the grievances of the shopmen's organizations of all the railways, whether they had theretofore had the benefit of definite agreements or not. There can be no question, therefore, of the readiness of the Government to deal in a spirit of fairness and by regular methods with any matters the men may bring to their attention.

"Concerted and very careful consideration is being given by the entire Government to the question of reducing the high cost of living. I need hardly point out how intimately and directly this matter affects every individual in the nation, and if transportation is interrupted, it will be impossible to solve it. This is a time when every employee of the railways should help to make the processes of transportation more easy and economical rather than less, and the employees who are on strike are deliberately delaying a settlement of their wage problem and of their standard of living. They should promptly return to work, and I hope that you will urge upon their representatives the immediate necessity for their doing so."

The refusal of the Senate committee to take over the responsibility for dealing with the wage question and the related question of rate advances leaves the responsibility for a decision with Mr. Hines, where it was before, but it leaves him in a stronger position. If he had granted additional wages and had attempted to offset them with further increases in rates under the broad powers conferred on the President and the director general during the war he would undoubtedly have been subjected to violent criticism in Congress, and he would have had no assurance that his rates would have been allowed to remain in effect whether or not the Cummins bill is passed. Congress and others may yet criticize whatever he does, but at any rate he has been given such clear instructions to go ahead and use his judgment that it is believed the commission could hardly fail to recognize his wages in relation to a rate increase. Nor can Congress accuse him of acting without authority if he goes before it with another request for an appropriation, although there would probably be some discussion as to whether any further increase in wages at this time should be charged to the taxpayers, as a part of the cost of the war, instead of to the patrons of the railways, as a part of the cost of transportation.

Director General Hines has authorized the following:

"The shop men who have been on unauthorized strikes in various parts of the country are rapidly returning to work and already conditions are practically normal in most parts of the country. It is anticipated that at a comparatively early date the strikes will have entirely terminated whereupon the Railroad Administration will promptly take up and deal with the wage questions now pending.

"Ever since it was made clear by the action of the Senate committee that Congress does not wish to deal with the grave wage problems now pending, and the rate problem which is also inextricably involved, and also will offer no objection to the Railroad Administration exercising the powers conferred by the federal control act to deal at this late date in federal control with this great subject (the issue involving hundreds of millions of dollars) I have been giving my continuing attention to the study of the matter with a view to making a just and reasonable exercise of the heavy responsibility which thus rests upon me.

"In this connection I would like to make it clear to the public and the railroad employees alike that the situation now existing could not have been dealt with until this time.

"It is true that in February, 1919, the shopmen submitted their proposals to the Board of Railroad Wages & Working Conditions, but when this was done it was clearly understood that since the original proposals of the shop employees had been dealt with in July, 1918, while other classes of em-

ployees making similar proposals had received no consideration at all, these other classes of employees must first be dealt with. Another circumstance of importance was that the shopmen were also pressing proposals for uniform rules and working conditions involving a great many points of difference and difficulty. The result was that despite the most earnest desire on the part of all the members of the wage board to deal promptly with these matters, no members of the board, either the labor members or the management members, were in position to submit their final suggestions until July 16, before which time the date of July 28 had been fixed upon by agreement with the representatives of the shop employees for a discussion of the rules and working conditions and wage matters.

"By July 16 the situation had assumed a wholly different shape. Practically every class of railroad employees had come forward urging either an increase in wages or a reduction in the cost of living.

"Therefore by the time the conference with the shop representatives took place on July 28 the Railroad Administration was confronted with a situation involving practically all of the 2,000,000 railroad employees and necessarily had to obtain a clear understanding as to the powers it ought to exercise in this regard so near the termination of federal control. I therefore proposed to the President, and he forwarded to the Interstate Commerce Committees of the Senate and House, the recommendation that Congress establish a wage board to deal with these matters and provide that the Interstate Commerce Commission should make such rates as might be necessary to meet any wage increases so made. When the Senate Committee unanimously decided against this course and indicated its view that the matter could properly be handled through the powers created by the federal control act, the situation was clarified in such a way as to admit of my assuming the responsibility incident to such far reaching action."

Director General Hines has sent a reply to a telegram from James Hamilton Lewis of Chicago, saying that he cannot consistently comply with the suggestion to deal directly with the local representatives of the striking shopmen in Chicago. The Railroad Administration, he says, cannot deal with these problems except through the duly chosen international officers of the regularly constituted organizations and their authorized committee. The Railroad Administration has pursued a consistent policy in this respect and has dealt with these duly chosen representatives from the beginning of federal control. The strikes which have taken place have not been authorized according to the laws of the shopmen's organizations with which at all times the Railroad Administration has dealt and these strikes have had the effect of repudiating the established organizations and of bringing the consideration of the matter to a standstill.

Shop Employees Return to Work

Reports began to arrive on Friday from all over the country that the striking shopmen were returning to work, although some of the men, including the employees of the Washington Terminal Company, refused to do so until their demands had been met. The strike had been in progress long enough to hamper the work of many of the roads considerably, and to interfere with the vigorous efforts that had been ordered to reduce the number of bad order cars that had accumulating during the spring months. On some roads it had been necessary to curtail some train service. Union officials in Washington said that about 40,000 men had walked out, although local officials of the unions had claimed from 100,000 to 250,000 had gone out.

In connection with the new wage demands it is understood that Mr. Hines considers the two main points to be ascertained are: First, how much the cost of living has increased as compared with the increases in wages allowed last year,

and by supplemental orders during the first part of this year, and, second, comparisons with wages being paid in other industries for similar or comparable classes of work.

Fourteen Organizations Demand More Wages

The statement presented to Mr. Hines on August 4, by the 14 organizations, as briefly noted in last week's issue, is as follows:

"After having given careful thought to all that was said at our conference with you and your associates August 4, 1919, we present the following for your consideration:

"Railroad employees have loyally co-operated in the operation of the railroads and are entitled to compensation which will at least re-establish the pre-war purchasing powers of their wage.

"We do not agree that rates of pay to employees and transportation charges are in any way so related. Minimum rates of pay should be sufficient to guarantee to the most unskilled employee an adequate living wage, with such additional amounts as will meet the necessities incident to old age, injury, sickness, and death, and higher rates based upon the skill, responsibility, and hazard required and involved. Also these wage rates should be such as will compare favorably to the wages paid for similar service in other industries.

"Transportation rates should be sufficient to guarantee:

"First—To all employees this just and equitable wage.

"Second—Maintain the properties in condition to render adequate service to the public.

"Third—Equitable returns upon the money actually invested.

"We cannot approve of the plan proposed by you for a congressional committee, for the reason that it means months of delay at a time when the questions involved require immediate settlement.

"You already have in the Board of Railroad Wages and Working Conditions the necessary machinery to dispose of these questions, and we ask that their function be restored and they be allowed to pass upon the questions submitted to them and that their findings be placed before the representatives of the recognized organizations for their consideration and be mutually agreed upon before being issued.

"The moneys with which to pay these increases should, in our opinion, be raised by an appropriation by Congress. This appropriation should be of a sufficient amount temporarily to take care of immediate deficits. In the meantime let the proper rate making body make a careful study as to what, if any, increases should be made in passenger and freight rates, prompt action in this regard being both essential and desirable. This will only give temporary relief and must be accompanied, or immediately followed, by a determined effort not only to prevent a further increase in the cost of living, but to secure a reduction therein.

"Any permanent solution of the railroad problem must necessarily remove the element of returns to capital as the sole purpose of operation. Therefore, we ask that you urge upon the President the necessity for the prompt passage by Congress of the required appropriation bill to meet the emergency now existing.

"Also that you indorse the Sims bill (H. R. 8157) now before the House of Representatives, and recommend to the President that he use all his influence to secure its immediate passage by Congress as the permanent solution.

"The Sims bill, if enacted into law, will give to the Interstate Commerce Commission its original authority over transportation rates, and employees cannot hope for increases in rates of pay except as they result from economy and efficiency in operation due to their own collective effects. Any increases to employees under this bill guarantees to the public equal benefits in reduction of transportation charges.

"Capital will be fully reimbursed for all money actually invested. Therefore no one can possibly suffer by the enactment

of this bill, unless it be the employees themselves, and they are willing to risk their future."

President Wilson's Address

In his address to Congress on August 8, in which he urged an active campaign to reduce the cost of living, the President referred to the wage question and the "vicious circle" as follows:

"It is a matter of familiar knowledge, also, that a process has set in which is likely, unless something is done, to push prices and rents and the whole cost of living higher and yet higher, in a vicious cycle to which there is no logical or natural end. With the increase in the prices of the necessities of life come demands for increases in wages—demands which are justified if there be no other way of enabling men to live. Upon the increase of wages there follows close an increase in the price of the products whose producers have been accorded the increase—not a proportionate increase, for the manufacturer does not content himself with that, but an increase considerably greater than the added wage cost and for which the added wage cost is oftentimes hardly more than an excuse. The laborers who do not get an increase in pay when they demand it are likely to strike, and the strike only makes matters worse. It checks production, if it affects the railways it prevents distribution and strips the markets, so that there is presently nothing to buy, and there is another excessive addition to prices resulting from the scarcity."

He also referred very pointedly to the present situation in the railroad field when he said:

"I believe, too, that the more extreme leaders of organized labor will presently yield to a sober second thought and, like the great mass of their associates, they will think and act like true Americans. They will see that strikes undertaken at this critical time are certain to make matters worse, not better—worse for them and for everybody else. The worst thing, the most fatal thing that can be done now is to stop or interrupt production or interfere with the distribution of goods by the railways and the shipping of the country. We are all involved in the distressing results of the high cost of living and we must unite, not divide, to correct it. There are many things that ought to be corrected in the relations between capital and labor, in respect of wages and conditions of labor and other things even more far-reaching, and I, for one, am ready to go into conference about these matters with any group of my fellow countrymen who know what they are talking about and are willing to remedy existing conditions by frank counsel rather than by violent contest. No remedy is possible while men are in a temper, and there can be no settlement which does not have as its motive and standard the general interest. Threats and undue insistence upon the interest of a single class make settlement impossible. I believe, as I have hitherto had occasion to say to the Congress, that the industry and life of our people and of the world will suffer irreparable damage if employers and workmen are to go on in a perpetual contest, as antagonists. They must, on one plan or another, be effectively associated. Have we not steadiness and self-possession and business sense enough to work out that result? Undoubtedly we have, and we shall work it out."

Labor Leaders Deny Intimidation

Whether or not it was influenced by the President's statements regarding strikes or whether it was considered that the impressions created by the various previous statements made by the labor leaders had had their effect, the executives of the 14 labor organizations embraced in the Plumb Plan League issued a statement on August 9 denying any purpose of intimidation.

"To prevent any misunderstanding as to the policy of the organized railroad employees," said the statement, "we united in a definite assertion that we have no desire and have had

none to impress upon the public, by violence or by threat, our proposal that the railroads be nationalized under 'tripartite control.'

"Two distinctly separate considerations now confront the people, the wage requirements of the railroad employees and the Sims bill (embodying the railway employees' plan for reorganization of the railroads).

"In the matter of wages we have submitted an eminently just proposition. We have said that if we are to continue to live as Americans should live, and are to care for our families as American families should be cared for, the profiteers must be restrained and our wages increased. Every fair-minded man, and every intelligent housewife, will recognize the reasonableness of this request. If Congress and the President cannot meet this request, it is still a living question and we shall have to try to find another solution.

"This, however, bears in no way upon our sponsorship of the Sims bill. We do hold to our conviction that the railroad employees are in no mood to consign themselves finally to the autocratic control of financial dictators, but in proposing the elimination of capital and the tripartite directorate, we have no purpose of intimidation. We appeal to the statesmanship of America and to the common sense of American manhood and womanhood. We believe in the native ability of American labor. What we ask is the Americanization of the railroads."

Rumors regarding plans of the labor leaders to threaten strikes either as an incentive to Congress to look with favor upon the Plumb plan or in connection with wage demands have been current for several months. As long ago as July 10 the following was distributed confidentially among the members of a prominent business association in a circular letter based on the association's advice from Washington:

"The bill above mentioned will be introduced in both houses of Congress simultaneously and almost immediately thereafter national propaganda in favor of the bill will appear. Paid lecturers will be sent into all parts of the country, invading even the smallest villages. There will be also a well-organized publicity bureau, which will flood the newspapers of the country with material favoring the bill.

"In the event that the Plumb plan is not given the fullest consideration by Congress, and if Congress permits the return of the roads on January first next instead of permitting the question to lie open so that it can be made an issue in the presidential campaign, there is said to be an understanding among the leaders of the brotherhoods that a general strike shall be called for January 1. The strike will occur in any case unless there is assurance of wage increases.

"Ample funds have been secured for the organization behind the Plumb Plan, and it has the full power of labor at the Capitol. It seems therefore certain that the railroad issue will be thrown bodily into politics. It is the Plumb contention that it ought to be in politics, and that no decision should be made as to the roads until the people have had a chance to register their opinion.

"This confidential information is given members of this Association in order that they may anticipate possible transportation difficulties at a later date in the handling of their transcontinental and interstate business."

Senator Smoot has made a protest in the Senate against the appointment of former Representative Edward Keating as "business manager" of the Plumb Plan League, at the same time that he is drawing a salary of \$7,500 from the Government as a member of a commission created by Congress for the purpose of reclassifying the salaries of Government employees. Mr. Keating was quoted in the newspapers as saying he did not intend to devote much time to the league until after January 1, when his work for the Government would be completed.

The latest reports on the number of shopmen on strike throughout the United States show a decided improve-

ment in the situation. In the East, Southwest and West, where the largest numbers of men have walked out, the situation seems to be clearing, with many men returning to work and traffic as a consequence gradually returning to normal. However, the situation in Boston and Atlanta, Ga., and especially in Chicago remains practically the same with both freight and passenger traffic seriously impeded by the gradual withdrawal of engines and cars needing repairs.

The striking shopmen on the Seaboard Air Line have practically all returned to their work as have the shop and car men on the Norfolk Southern. Approximately 3,000 men employed by the Baltimore & Ohio in the Baltimore shops have returned to their work and at Columbus and Cleveland conditions are rapidly approaching normal. The Louisville & Nashville also reports that large numbers of men are returning to work.

In the Central Western region there is little change from last week, in the number of men at work. Approximately 3,800 men employed on the Chicago, Rock Island & Pacific System have returned to their work and the conditions at Denver, Colo., where practically all of the shopmen have been on strike are again normal. The Chicago & Alton has reported that approximately 550 men have returned to the shops of that road. The situation on the other lines in the Central Western region is practically the same as previously reported, but the total number of men out has decreased, as a result of the defections in the ranks of the strikers, to approximately 13,000. Freight has been kept moving through this region despite difficulties; and with the return of some of the men conditions are gradually returning to normal. It was not found necessary to curtail passenger train service. The strike was most seriously felt in the grain states where the movement of grain to the markets, already partially crippled by a shortage of cars, was further curtailed by the necessity for taking cars out of service.

Northwestern regional officers handling the strike situation have prepared the following summary of conditions in the West which gives the situation on these roads, on Tuesday, August 12.

Atchison, Topeka & Santa Fe.—No men have returned to work. No accumulation. Passenger and freight business being handled. Approximately 1,100 men on strike.

Baltimore & Ohio, Chicago Terminal.—No men have returned to work. Nine engines out of service. No accumulation. Freight and passenger business being moved.

Chicago Belt.—Four car inspectors returned to work. No other change in labor situation. Handled 2,600 cars August 11. Have moved all business offered, and delivered everything that connections can take. No accumulation that interferes with operation. Expect to return three engines that have been out of service. Approximately 260 men out.

Chesapeake & Ohio of Indiana.—No men have returned to work. Have made some deliveries of freight and also received some.

Chicago & Eastern Illinois.—Freight and passenger business slowing up. All men (2,800) remain out.

Chicago & Alton.—No change in labor situation at Chicago. At a number of the terminals on the line all of the men have reported back for work, making total of 550 men returned. Passenger business being handled, and some freight.

Chicago & North Western.—No men have returned to work. Understand that all men at points other than Chicago have returned to work with one exception. More suburban trains have been taken off. Accumulation of freight for points west of Clinton, Iowa, have been somewhat reduced. Expect improvement on Iowa business today.

Chicago and Western Indiana.—No men have returned. Handling all business. Approximately 150 men out.

Chicago, Burlington & Quincy. No men have returned. Handling all business. Freight business very heavy, and being moved with practically no delay. Total shopmen out, 500.

Chicago Great Western.—No men have returned to work. Freight and passenger business being moved without delay.

Chicago, Indianapolis & Louisville.—Ten men employed in Chicago roundhouse. All men at Lafayette, Ind., have returned to work. All freight and passenger business being moved.

Chicago Junction.—Ten car men have returned to work, leaving 270 men still on strike. No accumulation for any connection. Received 1,162 cars of live stock; 929 sent before 8 a. m. (Stock receipts last year for the same day 1,077).

Chicago, Milwaukee & St. Paul.—No men have returned to work. Freight and passenger business being moved with very little delay. Approximately 7,750 men out.

Chicago, Rock Island & Pacific.—Approximately 3,800 men have returned to work. Freight and passenger business being moved with very little delay.

Elgin, Joliet & Eastern.—No men have returned to work. Are moving some freight business, but not much improvement over day before yesterday. Total of 2,310 men still on strike.

Erie.—No men have returned to work. Passenger business on time. Moving very heavy freight business with very little delay.

Grand Trunk.—No men have returned. No accumulation. Freight and passenger business being moved.

Illinois Central.—No men have returned. No accumulation. Everything being moved.

Indiana Harbor Belt.—No men have returned to work, 550 still being on strike. 4,010 cars handled August 11. No accumulation for connections.

Michigan Central.—Twelve car repairers at Randolph St., Chicago, left the service yesterday. Both freight and passenger business being handled without delay.

Minneapolis, St. Paul & Salt Ste. Marie.—No men have returned to work. No accumulation. Passenger and freight business being moved. Approximately 1,540 men still out.

New York Central.—Twenty-three men returned to work yesterday, making a total of 53 men who have returned. Passenger and freight business being handled, and there is no accumulation.

New York, Chicago & St. Louis.—No men have returned to work. Passenger and freight business being moved without delay.

Pittsburgh, Cincinnati, Chicago & St. Louis and the Pittsburgh, Fort Wayne & Chicago.—No men have returned. Handled about 800 cars, mostly empties, which cannot be moved on account of conditions east of here. On Fort Wayne, business is being moved currently. No accumulation.

Pere Marquette.—Practically no change in labor situation. Business is being handled currently.

Wabash.—No men have returned to work. Passenger business being moved, and some freight business.

Car Interchange Bureau, Chicago.—Forty-two men who left service August 9 have returned to work.

The Chicago & North Western took off 21 Chicago suburban trains. This road reported serious difficulty also in handling its heavy grain, ore and coal traffic; and in many places, especially in the ore and coal regions the freight movement was practically stopped by the shortage of cars. However, food, ice, milk and some non-perishable freight was moved daily, officers in many cases performing the work previously done by the striking men.

The situation in New England remains very uncertain. About 13,000 men went out altogether, and it is estimated that 1,000 of these have been re-employed. The strike at once imposed serious restrictions on all traffic as the roundhouse men, terminal car inspectors and other workmen connected immediately with train operation, very generally left their jobs. Large numbers of suburban runs were discontinued by the New York, New Haven & Hartford, both in the New York and the Boston territories. Most of the dining cars were taken off and many sleeping cars, the shortage of locomotives being the most immediate difficulty. As we go to press, it is estimated the New England roads are moving about 65 per cent of their normal freight traffic.

The passenger traffic of the New Haven has been heavy for several months and the pressure is now severe on both through and suburban trains. For distances within a few

miles, suburban passengers have to a considerable extent made their way to and from their places of business by other conveyances, but the suburban trains have been able to carry their passengers by packing 100 or more in each car. The New Haven reported the total number of trains taken off as 102, including both long distance and short distance runs. In many cases six-car trains had to take the place of two ten-car trains.

On the Harlem River branch of this road, 11 miles long, from New Rochelle, N. Y., to a connection with the New York city railroads at Harlem River, normally run about 20 local passenger trains each way. All local passenger traffic was discontinued on Sunday the 10th. The passenger traffic on this branch is largely coast resort and week-end traffic. On Monday a part of these trains were restored. Between Providence, R. I., and Fall River, Mass., the local electric trains were discontinued, and later a part of the service was resumed with steam locomotives. The shopmen on the New Haven and the Boston & Maine are understood to be still discussing the appeal of President Wilson and the orders or appeals of their leaders; and they are expected to have some definite answer for the Railroad Administration by today (Friday).

Embargoes on all freight but live stock and perishables were placed last week by the New Haven, the Boston & Maine and the Boston & Albany; but this week these were modified so as to allow agents to accept food, feed, railroad coal and a few other commodities. Of freight of all kinds about 2,000 cars are being moved into New England daily, even under strike conditions.

Practically no change was reported in the status of the shop men's strike in the Central Western and Northwestern regions on Wednesday, August 13. In the Central Western region the latest reports indicate that a total of approximately 4,900 men have returned to work on the lines of the Chicago, Rock Island & Pacific and that approximately 4,100 still remain out. Unconfirmed reports also indicated that the striking shop men on the Wabash would return to work. Traffic conditions in this region are gradually improving and no further serious trouble is expected as a result of the shop men's walkout.

In the Northwestern region the latest reports indicated that small groups of shop men at minor points in the region were returning to their work; however, the majority of the men are standing firm in their request for wage increases.

Due to the splendid work on the part of superintendents, trainmasters, and other subordinate executives in both of these regions, the movement of freight and perishables has been maintained throughout the strike, although seriously curtailed at many points.

House Committee Hearings on Railroad Regulation

LEWIS H. HANEY, director and chief economist of the bureau of research and publicity, of the Southern Wholesale Grocers' Association, testified before the House committee on interstate and foreign commerce on August 11, proposing amendments to the Esch-Pomerene bill to extend the jurisdiction of the Interstate Commerce Commission over private car lines. Mr. Haney asserted that through ownership of refrigerator cars, packers enjoy many special privileges which are discriminatory against the wholesale grocers, who, he said, have been the first to feel the growth of the "great food trust which has been more in evidence during the war." The packers, he said, have come to dominate the meat business and are now extending their control over the chief items of canned foods and hold themselves out as distributors of full lines of food products and they have been able to make these inroads on the food distribution

business through their special advantages in transportation. Among these he mentioned the special service given refrigerator cars, the practice of including packing house products and other food products that do not require special service in peddler and refrigerator cars, which furnish to the packer a storehouse on wheels and give him a great advantage in competition with the wholesale grocer. He read a long list of food products which are so handled. He also mentioned the large organization of the packers which keep check on the movements of the cars and obtain especially prompt handling, whereas the jobber does not have refrigerator car service and cannot get the schedule package cars unless sufficient tonnage is available. The packers are thereby enabled to give more frequent service and to supply goods in better condition to the retailer. The railroads, he said, take the position that they cannot furnish special types of cars such as refrigerator and tank cars, but it is inconsistent with their function as a common carrier that 90 per cent of the refrigerator cars should be owned and controlled by the packers as this operates against the providing of an adequate supply of such equipment. He proposed that the commission's jurisdiction be extended over all cars, irrespective of ownership so that under the provisions of the Esch bill the commission could require the furnishing of an adequate supply of cars and also that special cars should not be used for freight not requiring special service unless made available to all shippers on equal terms.

Martin H. Decker, formerly of the New York Public Service Commission, testified before the committee on August 12, supporting in general the provisions of the Esch-Pomerene bill but expressing opposition against giving the commission jurisdiction over port to port rates. He also proposed that the commission's powers over car service be exercised in ordinary times instead of merely in times of emergency, the establishment of six regional commissions, and an extension of a plan similar to that of the farm loan bank act to the railroads. Mr. Decker said he thought nearly all the people are convinced that continued government ownership under any theory would mean wretched service and enormous deficits and he urged that the railroads be returned free of any government orders put in effect during the period of government control which would prevent the free exercise of judgment of their officers in order that "this railroad game may be started over again with a new pack of cards."

B. Gilham, traffic manager of the Macon, Ga., Chamber of Commerce, supported the Esch-Pomerene bill in general and urged the committee to disregard for the present the various new plans for dealing with the railroads, but to make every effort to get back to something like pre-war conditions before plans contemplating radical changes are taken up. Mr. Gilham said that most people familiar with the situation were convinced that a substantial increase in railroad rates would have been necessary even if there had been no war.

Luther M. Walter, counsel for the National Association of Owners of Railroad Securities, and Samuel H. Beach, president of the Savings Banks Association of the State of New York, were expected to testify before the committee later in the week on the Warfield plan. On Wednesday, a report by the House committee on interstate and foreign commerce recommending the passage of the Cummins bill was filed by Representative Sanders for the committee.

Although lines of the Great Northern, the Chicago, Milwaukee & St. Paul and the Northern Pacific pass through or near areas recently burned over by huge forest fires in the states of Idaho and Montana, practically no loss was sustained by the railroads as a result of these fires. In Montana 45,064 acres were burned over and approximately 135,189,000 ft. b. m. of lumber was destroyed, and in Idaho 41,140 acres were burned over, destroying approximately 126,122,000 ft. of lumber. Though no damage was done to the railroads, the fire in many places came within two miles of the tracks.

General News Department

The Governor of West Virginia, John J. Cornwell, has sent letters to the governors of other states calling attention to the loss of revenues from taxation which would fall on the states if the Plumb plan of railroad operation should be adopted. He estimates that federal ownership would mean, to West Virginia, a loss of \$3,000,000 in taxes yearly.

Wages of street car employees are to be increased 12 per cent on a dozen railroads, city and interurban, in accordance with an award by the War Labor Board, announced last Tuesday. William Howard Taft, head of this board, says that the cost of living was the element that decided the board in its decision; the ability or the inability of the employers to pay the wages prescribed was not considered.

Tentative valuation reports have been issued by the Bureau of Valuation of the Interstate Commerce Commission on the New Mexico Midland, the Ray & Gila Valley, the Quincy Western, the Tonopah & Tidewater, the Bowdon Railway, the Georgia Southern & Florida, the Georgia Northern, the Death Valley, the Dover & Southbound, the Carolina Railroad, the Hampton & Branchville, the Arizona Southern and the Sylvania Central.

A "Red" July is the term used by H. M. Mayo, Superintendent of Safety of the Southern Pacific and other lines in Texas, in his comment on the accident record of that month, showing fatal accidents to five valued employees, killed in the performance of their duties. In his Bulletin, No. 24, describing these accidents, he says: "This series of unfortunate casualties illustrates what the management has been earnestly endeavoring to impress upon its employees—the urgent necessity for individual caution. The exercise of proper forethought would probably have prevented these accidents. They were each avoidable, but the avoidance was in the employee. The only criticism we can offer is, that the element of individual safety was disregarded or, unfortunately omitted. Men learn through the misfortune or experiences of others. May we not hope that the sad lessons contained in the above, may be heeded by our men generally. Sometimes a man dies that those that come after him may live. If this be so here, then you who live have an obligation which you may not side-step with justice to those who have 'passed.'"

Illinois Manufacturers' Association Meeting Will Consider Railroad Problem

The Illinois Manufacturers' Association has issued a call for a meeting of representatives of all classes of industry interested in the solution of the present railway problem, including manufacturers, farmers, railroad men and industrial interests, on September 8 and 9 at the Congress Hotel, Chicago. It is expected, however, that the meeting will be so large as to necessitate transferring the conference to the Auditorium.

Addresses on the Plumb plan and other proposed solutions of the railroad problem will be given by representatives in various fields. A permanent organization to combat all such Socialistic moves as the Plumb plan will probably eventuate as a result of the conference.

A National "Drive" for Safety

Walker D. Hines, director general of railroads, announces that a "National Railroad Accident Prevention Drive" will be started on October 18 at 12:01 a. m. and will be continued until October 31 at midnight, to be conducted under the supervision of the Safety Section. A circular, sent to the regional directors, calls for their co-operation. All officers and employees are expected to give their hearty support.

This section follows the very satisfactory results of cer-

tain "no accident campaigns" already carried out. The results of these campaigns are summarized as follows:

Region	Tot. Num. of Employees	Casualties 1919	Casualties 1918
Southern, Jan. 19-25	230,000	77	466
Southwestern, May 1-31	174,884	646	1,475
Central Western, June 22-29	327,000	100	456
Northwestern June 22-29	274,234	119	481

In the Southern region 28 out of 45 railroads reported no accidents; in the Southwestern region 12 roads were in this class, and in the Central-Western 47 out of 67 showed clear records. In the Northwestern region this was true of 50 out of 63.

Chamber of Commerce

Opposes Government Ownership

The board of directors of the Chamber of Commerce of the United States has issued a formal statement regarding the demand of railroad labor organizations for government ownership. "To increase the present public debt from 30 billion dollars to 50 billion dollars in order to acquire the roads," it says, "would severely strain the credit of the nation and depress the value of the Liberty and Victory bonds held by millions of people. The public as a whole through the government would be asked to assume the burden and financial risks of railway capital, while the roads would be run by and for the managers and employees. The suggestion of possible reduction of costs of transportation and betterment of service under such a system is purely theoretical and has not been established in practice by the government operation of the railroads. On the contrary, in this country as elsewhere the very opposite results have been shown.

"Government ownership means a retarded development of the railroads. Because of the war the country is sadly behindhand in railroad construction. Additional facilities must be added at once and enormous railway extension must be made during the next few years to meet the actual demands of our country's growth. This calls for the highest type of individual initiative and enterprise. Politics must be kept out of the railroad business. To make the railroads public property and those who operate them government employees is to throw the railroads into the arena of party politics. In such an event there would be serious danger of autocratic control of the government by government employees.

"The overwhelming trend of public sentiment throughout the United States is opposed to government ownership of the railroads. The Chamber of Commerce of the United States believes in the maintenance of that most vital principle of our American institutions—private initiative."

Track Supply Association Exhibit

Fifty firms have already arranged for space in the exhibit of the Track Supply Association which will be presented at the Auditorium Hotel, Chicago, at the time of the thirty-seventh annual convention of the Roadmasters' and Maintenance of Way Association on September 16-19 inclusive. This is the largest number of firms which have ever arranged for exhibits at this early date.

The following is a list of those companies which have already arranged to exhibit.

LIST OF EXHIBITORS OF THE TRACK SUPPLY ASSOCIATION

Air Reduction Sales Company, New York.
American Hoist & Derrick Company, St. Paul, Minn.
American Steel & Wire Company, New York.
American Valve & Meter Company, Cincinnati, Ohio.
Anchor Company, New York.
Balkwell Manganese Crossing Company, Cleveland, Ohio.
Bethlehem Steel Company, Bethlehem, Pa.

Carbic Mfg. Company, Duluth, Minn.
 Chicago Malleable Castings Company, Chicago.
 Crerar, Adams & Company, Chicago.
 Dressel Railway Lamp Works, New York.
 Duff Mfg. Company, Pittsburgh, Pa.
 Fairbanks, Morse & Co., Chicago, Ill.
 Fairmont Gas Engine & Railway Motor Car Company, Fairmont, Minn.
 Hauck Mfg. Company, New York.
 Hayes Track Appliance Company, Richmond, Ind.
 Ingersoll-Rand Company, New York.
 Kalaurazoo Railway Supply Company, Kalamazoo, Mich.
 Lackawanna Steel Company, Buffalo, N. Y.
 Lundie Engineering Corporation, New York.
 Luther Grinder Mfg. Company, Milwaukee, Wis.
 Madden Company, Chicago, Ill.
 Milburn Company, Alexander, Baltimore, Md.
 Mudge & Company, Chicago, Ill.
 National Lock Washer Company, Newark, N. J.
 National Malleable Castings Company, Cleveland, Ohio.
 Oxweld Railroad Service Company, Chicago, Ill.
 P. & M. Company, Chicago, Ill.
 Pocket List of Railroad Officials, New York.
 Positive Rail Anchor Company, Marion, Ind.
 Q. & C. Company, New York.
 Rail Joint Company, New York.
 Railroad Supply Company, Chicago.
 Railway Review, Chicago.
 Ramapo Iron Works, Hillburn, N. Y.
 Reading Specialties Company, Reading, Pa.
 Rodger Ballast Car Company, Chicago.
 Simmons-Boardman Publishing Company, New York.
 Sellers Mfg. Company, Chicago.
 Southern Railway Supply & Equipment Company, St. Louis, Mo.
 Track Specialties Company, New York.
 Union Switch & Signal Company, Swissvale, Pa.
 United States Switch Company, Eau Claire, Wis.
 Verona Tool Works, Pittsburgh, Pa.
 Wharton, William, Jr., Company, Inc., Easton, Pa.
 Wyoming Shovel Works, Wyoming, Pa.

Automobile Accidents at Grade Crossings

The large number of automobile accidents at grade crossings has brought forth the following interesting comment by R. J. Clancy, assistant to the general manager of the Southern Pacific, the Western Pacific and the Tidewater Southern:

"When running at maximum permissible speed on unrestricted track, the average passenger train obstructs a crossing less than seven seconds, yet, judging from crossing accidents, there are many drivers of automobiles who misjudge the speed of passenger trains or are too impatient to wait that long and as a consequence run into or are struck by trains, resulting in serious injury or death.

"During the first six months of 1919, 18 people were killed, 81 were injured and 233 automobiles were damaged or destroyed in grade crossing accidents, compared with 26 killed and 110 injured during a corresponding period in 1918, a decrease in 1919 of 30.8 per cent in the number killed and of about 36 per cent in the number injured, which, in view of the increase in the number of automobiles in 1919 over 1918, indicates that some progress is being effected in the prevention of such accidents.

"Of these 233, 30 stalled on the crossing and were struck by trains; 111 attempted to cross almost immediately in front of and were struck by trains; 59 ran into trains; 1 skidded into train; 19 ran into and broke down crossing gates lowered to protect them from passing trains; 3 ran into and injured crossing flagmen; 4 ran into cattleguards or crossing signs; and 6 ran over end of track or were not sufficiently into clear. In the two latter instances the accidents resulted in attempts to escape being struck by train after it was observed that the crossing could not be effected.

"Most of these accidents involved passenger trains, which would seem to indicate either that some automobile drivers do not exercise necessary precaution or they misjudge the speed of passenger trains and fail to realize that on unrestricted track a passenger train running at maximum permissible speed covers half a mile in three-fifths of a minute. This is short time to get out of the way, especially if necessary to shift gears or if anything goes wrong with the mechanism of a machine. On single track by waiting about three-fifths of a minute for train to approach and pass all danger would be eliminated, and there certainly can be few if any instances where the circumstances occasioning haste are so compelling as not to permit of a life-saving wait of a fraction of a minute.

"In some instances drivers of automobiles raced with trains and were either struck on the crossing or ran into the train, evidently failing to realize that the speed of their machine, though thought greater than that of the train was in reality considerably less, as is usually the case. That misjudgment of the speed of passenger trains enters into such accidents appears quite clear from the fact that accidents of this character involving freight trains are relatively much less.

"Abatement of such accidents is not a question of obstructed vision, for accidents are occurring where vision is unobstructed in no less proportion than where restricted. It is not a question of flagmen, gates, or warning signals at crossings, for our flagmen have been run down and injured, our gates run into and broken, and warning signals have been disregarded. It is purely a question of drivers of automobiles exercising reasonable judgment and precaution."

Car Shortage in Western Territory

A shortage of freight cars with which to move grain and coal in western territories has become serious according to protests made to the Railroad Administration by numerous organizations of producers and shippers. The situation is especially acute in central and southern Illinois, central Iowa and in producing regions east of the Missouri river.

Grain dealers in Springfield, Ill. and other points in central Illinois recently informed the Railroad Administration that disaster was impending unless cars could be had for loading immediately. According to these protests the activities of threshing crews in these districts have ceased because of the congested elevators and the car movement is slow with no prospect of relief. Aid has been promised by the Railroad Administration and every effort is being made to relieve the congestion as soon as possible. Practically the same conditions prevail in Ohio, central Iowa and other producing points in the middle west.

Officers of the Railroad Administration reply that the car shortage this year is much the same as has been reported every year during the corresponding season. In answer to the charge that new cars are lying idle in yards because of the disagreement between railroads and the administration over the purchase of these cars, it is stated that they are being stenciled as rapidly as possible and placed in service. Approximately 10,000 cars of this type have been promised to the Northwestern region to relieve the situation in that district. Every effort is also being made in the Central Western region to obtain cars for the congested districts and it is expected that within a short time the loadings in that region will relieve the country elevators.

Anthracite Shipments for July, 1919

The shipments of anthracite for July as reported to the Anthracite Bureau of Information at Philadelphia, show a substantial increase over the preceding month and exceeded a total of 6,000,000 tons for the first time since October, 1918. The tonnage sent out last month amounted to 6,052,334 tons, an increase over June of 432,743 tons, or 7.7 per cent. Compared with July, 1918, when production was abnormally stimulated by war conditions, the shipments last month showed a decrease of 1,032,441 tons. A large part of this decrease, however, was in the production of steam sizes from washeries that are not in operation this year. Washery production in 1918 averaged 550,000 tons a month, whereas in recent normal years the washery output has amounted to between 150,000 and 250,000 tons a month. Compared with July, 1916, the latest normal year in anthracite production, the shipments last month showed an increase of 619,456 tons. The shipments for the first four months of this coal year, beginning April 1, have amounted to 22,608,555 tons, as compared with 21,146,536 tons for the corresponding period in 1916, an increase of nearly one and a half million tons.

Telephones in England. In 1918 there were approximately 130 telephones per 1,000 inhabitants in the United States and only 19 per 1,000 inhabitants in the United Kingdom

REVENUES AND EXPENSES OF RAILWAYS

MONTH OF JUNE, 1919

Name of road.	Average mileage operated during period.	Operating revenues			Operating expenses			Net from railway operation.	Railway tax accruals.	Operating income (or loss).	Increase (or decrease) in income last year.
		Freight.	Passenger.	Total (inc. misc.)	Way and structures.	Maintenance of equip-ment.	Traffic.	Portation.			
Ala. & Vicks.	141	\$147,993	\$62,045	\$222,154	\$76,007	\$44,700	\$1,863	\$86,314	\$7,950	\$11,317	\$78,745
Ala. Great Sou.	312	595,983	226,498	871,577	133,145	191,309	15,772	\$34,864	96.76	22,343	78,135
Ann Arbor	301	255,396	56,785	332,416	35,289	65,888	5,806	17,370	87.63	16,700	74,136
Arizona Eastern	377	252,880	43,080	314,391	57,819	40,288	3,746	9,234	66.55	10,514	26,257
Aich. Topeka & Santa Fe.	8,634	8,590,736	3,944,208	13,679,381	1,824,003	3,515,386	141,843	5,117,108	254,022	10,782,348	1,037,381
Atlanta & West Point.	93	90,574	85,189	200,230	30,260	43,678	3,174	92,417	78.82	2,897,032	1,037,381
Atlanta, Birm. & Atlantic.	639	295,340	71,686	401,038	107,578	125,435	7,886	23,525	89.59	12,323	8,544
Atlantic Coast Line.	177	78,913	299,023	377,936	39,543	66,897	1,540	17,533	131.26	141,701	70,986
Balt. & O. Chicago Term.	4,875	3,146,031	1,467,921	4,993,597	748,603	1,135,726	57,823	2,152,119	72.73	12,000	42,058
Balt. & O.	90	1,107,854	508,983	1,533,217	1,998,361	4,343,537	157,966	6,015,367	66.47	663,382	1,538,412
Balt. & Ches. & Atlantic.	5,151	1,078,544	508,983	1,533,217	1,998,361	4,343,537	157,966	6,015,367	115.04	26,543	53,353
Bangor & Aroostook.	87	85,599	47,713	138,853	29,319	39,119	4,231	80,287	85.26	2,244,276	3,945,956
Be-rumont, Sou. Lake & Western.	632	278,534	373,400	651,934	86,708	126,173	3,734	119,884	110.42	3,160	17,633
Belt Ry. Co. of Chicago.	118	51,821	23,839	80,845	24,845	25,670	1,680	51,790	95.17	21,000	134,170
Ber-semer & Lake Erie.	31	1,313,226	32,719	1,368,752	21,638	51,977	329	179,943	134.43	27,843	30,554
Birmingham & Gulf Ry.	217	70,346	1,163	71,509	15,674	31,105	11,686	345,289	81.67	58,550	118,041
Birmingham Southern	37	70,346	1,163	71,509	15,674	31,105	11,686	345,289	62.67	510,878	496,371
Boston & Maine.	29	29,603	1,163	30,766	64,206	33,836	1,134	21,544	171.43	53,430	6,232
Buff. & Rochester & Pitts.	2,258	3,688,153	1,823,173	6,120,508	948,492	1,032,598	41,121	2,968,282	85.50	5,603	1,863
Buff. & Susq.	589	865,583	126,796	1,042,582	250,367	404,796	14,764	598,856	84.58	943,256	762,931
Canadian Pacific Ry. Lines in Maine.	296	154,362	6,238	178,500	44,330	104,079	1,803	57,899	125.07	27,000	2,057,004
Charleston & Western Carolina.	233	91,001	32,200	136,903	71,520	30,077	7,740	92,067	121.23	37,888	41,138
Central New England.	542	123,886	40,006	180,091	40,139	29,128	5,192	147,536	146.48	63,642	11,000
Central of Georgia.	301	44,542	22,499	48,041	142,840	91,697	2,876	237,169	125.39	45,733	7,724
Central of New Jersey.	1,918	1,067,613	571,878	1,730,101	292,411	321,999	33,586	818,284	100.94	4,585	16,532
Central Vermont Ry.	685	2,595,076	729,501	3,555,595	332,938	810,514	20,980	1,569,888	87.87	200,806	145,201
Carolina, Clinchfield & Ohio.	411	370,836	82,481	453,317	142,411	126,641	7,767	250,330	79.23	738,423	580,997
Chesapeake & Ohio.	282	444,923	34,393	487,641	60,923	123,373	5,356	163,869	113.65	69,347	17,400
Chicago & Alton.	2,306	4,714,050	1,559,651	6,711,915	1,677,450	1,822,329	34,471	2,899,647	75.03	121,723	16,300
Chicago & Eastern Ill.	1,050	1,458,544	586,671	2,188,104	384,350	1,153,548	21,103	784,741	1,386,160	172,000	1,674,100
Chicago & Erie.	1,131	1,453,306	400,809	2,003,522	309,164	708,243	20,757	827,446	95.41	191,952	79,506
Chicago & North Western.	269	611,022	122,820	733,842	145,441	130,266	10,163	337,513	95.41	191,952	79,506
Chicago, Burlington & Quincy.	8,090	8,130,666	3,256,312	12,486,978	2,032,587	2,282,113	66,493	5,038,236	87.01	104,961	27,678
Chicago Great Western.	9,473	8,048,506	3,146,188	12,219,535	2,038,225	2,808,659	82,338	4,934,588	2,713,320	475,000	223,475
Chicago, Indianapolis & Louisville.	1,936	1,084,506	567,328	1,885,433	305,984	343,359	21,103	784,741	84.36	274,503	145,809
Chicago Junction Ry.	657	705,056	265,682	1,081,445	118,545	266,492	15,520	27,431	171.448	55,496	171,720
Chicago, Milwaukee & St. Paul.	12	8,862,648	2,761,962	12,883,511	57,548	30,080	86	245,337	80.39	332,638	123,259
Chicago, Rock Island & Gulf.	10,648	2,921,319	23,909	3,189,898	2,536,926	3,205,962	7,864	5,595,582	113.71	2,129	174,555
Chicago, Rock Island & Pacific.	474	942,273	84,263	1,046,536	62,016	66,292	3,381	99,583	90.95	539,620	44,671
Chicago, St. Paul, Minn. & Omaha.	7,594	5,308,897	2,935,006	8,787,316	901,804	1,906,185	101,816	3,717,104	1,157,568	624,160	3,716,788
Chicago, Terre Haute & S. E.	1,749	1,423,796	707,929	2,285,648	447,688	444,284	15,985	1,129,310	7,400	79,397	24,098
Cin., Indianapolis & Western.	374	263,683	20,265	291,829	50,926	152,105	3,154	136,661	13.15	13,155	23,175
Cin., New Ori. & Texas Pac.	321	167,742	57,003	248,046	52,760	74,983	4,711	146,281	192.10	350,672	1,569,967
Cin. Northern	337	979,651	337,770	1,380,962	161,565	357,913	29,352	544,951	92.05	235,440	36,404
Cleveland, Cin. Chicago & St. L.	231	221,080	17,411	245,739	29,470	49,840	2,053	28,396	82.95	36,404	198,967
Colorado & Southern.	2,395	4,921,915	1,532,830	6,404,730	602,985	1,056,778	4,745	184,504	61.235	8,500	52,736
Colorado & Wyoming Ry.	1,099	749,605	211,522	1,019,405	229,148	232,650	11,516	407,049	1,487,851	185,000	1,301,936
Cumberland Valley	141	25,404	1,089	95,864	12,830	16,832	191	41,485	47,000	48,367	144,749
Delaware & Hudson Co.	163	355,183	72,831	459,413	56,444	145,192	5,970	190,825	4,000	16,902	12,412
Del. Lackawanna & West'n.	875	2,465,197	249,630	2,875,039	231,415	793,378	20,133	1,125,733	47,406	60,000	451,351
Denver & Rio Grande R. R.	955	4,571,060	994,158	5,565,218	717,727	1,332,722	37,877	2,439,672	511,835	318,427	1,199,066
Denver & Salt Lake R. R.	2,594	1,843,888	547,508	2,569,432	496,089	528,284	21,419	951,293	182,668	318,427	1,066,538
Detroit & Mackinac.	255	284,433	42,392	304,405	97,982	82,843	895	141,465	448,033	115,000	322,673
Detroit, Toi. & Ironton.	381	98,396	29,746	136,489	23,604	32,890	62,431	5,224	107.41	9,000	31,593
Detroit & Fort. Shore Line.	459	238,922	11,593	269,601	101,495	75,995	2,344	117,481	10,212	10,332	24,492
Duluth & Iron Range.	91	202,850	20,387	223,237	26,122	10,242	1,698	61,536	82.19	40,323	8,505
Duluth, Missabe & Northern.	202	1,178,769	1,287,087	2,465,856	125,412	105,613	3,861	112,458	53.53	97,417	141,493
Duluth, South Shore & Atlantic.	410	3,101,061	47,596	3,209,798	225,127	136,574	1,460	247,645	38.26	79,342	730,367
Duluth, Winnipeg & Pac.	599	294,935	106,476	431,798	100,465	67,589	6,068	184,663	64,152	2,376,693	910,908
East St. L. Connecting.	178	102,024	21,005	129,356	40,110	25,475	2,184	38,310	30,941	30,196	183,785
East St. L. & W.	3	744,207	207,470	1,005,584	142,720	7,676	265	34,050	56,226	6,526	10,711
Elgin, Joliet & E.	1,027	1,250,036	4	1,250,040	182,076	227,791	10,209	334,628	5,551	2,000	7,651
Erie R. R.	1,989	5,644,683	1,198,012	7,512,368	1,466,688	459,557	8,087	683,539	218,176	48,364	169,809
Fla. East Coast.	764	507,399	145,981	734,142	118,783	136,004	7,853	356,212	53,250	296,766	3,471,797
Fonda, Johnston & Gloversville.	88	40,092	62,651	104,331	11,571	8,906	—149	625,755	16,681	16,681	91,085
Ft. Smith & Western.	253	75,556	25,988	109,381	23,454	32,486	4,501	60,931	4,900	4,900	42,499
Cin., Lebanon & Nor.	276	71,037	8,260	93,302	23,948	19,007	6,707	108,349	5,000	4,121	9,062
Ft. Worth & Denver City Ry.	454	517,155	297,339	843,423	85,304	152,380	2,967	323,802	5,000	4,403	11,735
									19,250	233,996	384,655

REVENUES AND EXPENSES OF RAILWAYS

MONTH OF JUNE, 1919—CONTINUED

Name of road.	Average mileage operated during period.	Operating revenues			Maintenance of way and structures		Operating expenses		Operating ratio.	Net from railway operation.	Railway tax accruals.	Operating income (or loss).	Increase (or decrease) comp. with last year.
		Freight.	Passenger.	Total	Equip. ment.	Trans- portation.	General.	Total.					
At. Worth & Rio Grande Ry.	235	\$66,047	\$52,117	\$118,164	\$20,625	\$1,563	\$5,583	\$109,178	86.03	\$17,226	\$2,983	\$14,742	\$39,961
Gauleston, Harrisburg & San Ant.	1,381	1,219,194	522,269	1,741,463	452,204	15,339	654,307	1,461,983	80.30	358,483	52,892	305,163	194,777
Galveston, Harrisburg & San Ant.	13	1,219,194	522,269	1,741,463	452,204	15,339	654,307	1,461,983	80.30	358,483	52,892	305,163	194,777
Georgia R. R.	328	286,910	115,146	402,056	74,393	11,240	238,891	384,228	96.73	12,975	5,950	7,025	45,665
Georgia Southern & Florida	402	286,910	115,146	402,056	74,393	11,240	238,891	384,228	96.73	12,975	5,950	7,025	45,665
Georgia & Florida	348	43,572	19,111	62,683	23,784	1,727	51,194	103,303	163.65	36,260	4,202	40,461	21,378
Grand Rapids & Ind.	569	445,805	168,556	614,361	63,107	2,924	291,728	347,859	83.31	109,773	25,921	83,852	177,311
Great Trunk Western Lines	1,001	1,420,152	362,534	1,782,686	246,127	25,032	835,347	1,452,759	74.29	502,735	49,375	453,342	443,934
Great Northern Ry.	8,244	6,295,889	1,784,535	8,080,424	1,651,124	49,744	3,794,804	7,370,607	82.61	1,560,667	523,130	1,036,862	2,329,353
Gulf & Ship Island R. R.	307	146,012	45,875	191,887	40,045	3,992	109,995	150,990	102.03	4,155	11,409	15,576	9,808
Gulf Col. & Santa Fe	1,937	991,330	442,210	1,433,540	304,000	17,535	777,888	1,504,639	98.34	25,395	71,168	45,931	163,022
Grand Trunk Lines in New England	172	285,552	42,026	327,578	86,045	2,602	151,569	312,189	86.09	50,428	11,500	38,928	174,264
Gulf, Mobile & Northern	424	168,093	44,111	212,204	46,336	6,982	116,493	174,827	100.15	35,353	11,636	23,717	44,823
Hocking Valley	350	1,016,795	88,355	1,105,150	112,851	3,984	372,131	855,328	71.33	333,633	47,667	285,966	296,143
Houston & Texas Central	847	439,121	238,210	677,331	137,925	4,854	299,504	567,165	76.66	172,608	34,458	137,528	134,006
Houston, East & West Texas	190	125,273	46,649	181,922	33,052	1,199	99,177	159,575	88.23	21,332	6,249	14,894	15,829
Indiana Central	8,787	5,910,809	2,021,928	7,932,737	2,317,221	82,731	3,338,101	7,346,416	85.63	1,232,745	408,000	823,203	3,635,848
Indiana Harbor Belt	116	.....	.....	.....	532,420	99,447	1,764	490,863	92.19	41,557	9,955	31,603	227,330
International & Great Northern	1,159	872,754	304,084	1,176,838	250,544	9,016	592,397	1,140,849	91.17	110,404	30,000	80,371	470,697
Kanawha & Michigan	176	365,871	51,511	417,382	42,322	2,799	153,286	362,735	84.49	66,587	17,885	48,702	66,826
Kansas City, Mexico & Orient	272	55,365	20,335	75,700	42,378	1,472	58,862	167,102	208.12	86,814	6,250	93,063	13,382
Kansas City, Mexico & Orient of Texas	465	61,068	14,895	75,963	44,397	1,816	77,688	147,903	180.09	65,777	5,000	70,777	32,358
Kansas City Southern	774	786,772	201,909	988,681	212,898	20,213	475,030	1,014,315	93.62	26,581	61,258	87,839	94,721
Kansas City Terminal	774	786,772	201,909	988,681	212,898	20,213	475,030	1,014,315	93.62	26,581	61,258	87,839	94,721
Lake Erie & Western	902	644,080	63,987	708,067	172,581	11,273	381,921	830,791	111.11	23,721	20,180	3,541	21,119
Lehigh & Hudson River	96	201,298	31,677	232,975	42,472	1,635	99,566	184,346	86.73	28,197	5,400	22,797	30,295
Lehigh & New England	234	295,633	1,509	297,142	58,719	3,020	130,973	221,665	71.58	88,994	7,380	78,614	41,001
Lehigh Valley	1,435	4,349,753	664,342	5,014,095	1,500,142	49,666	2,305,291	4,993,261	91.03	1,467,831	146,723	344,723	1,326,525
Long Island R. R.	398	503,894	1,799,102	2,303,000	309,912	12,826	966,854	1,993,972	65.55	811,804	97,853	719,611	398,511
Louisiana & Arkansas	424.3	2,555,031	771,888	3,326,919	601,488	20,930	1,483,685	3,259,374	74.61	697,320	187,561	509,410	1,343,840
Louisiana Ry. & Nav. Co.	349	223,650	35,474	259,124	55,290	3,876	107,308	254,063	111.40	8,749	14,000	11,022	84,713
Low. Western	267	233,871	119,989	353,860	37,067	3,876	107,308	254,063	111.40	8,749	14,000	11,022	84,713
Low. & Nashville	5,013	9,583,339	2,024,983	11,608,322	2,789,602	118,678	4,232,005	8,583,761	101.15	145,597	9,075	136,302	61,490
Low. Henderson & St. L.	199	155,536	71,278	226,814	39,604	4,592	87,866	184,960	77.30	54,601	4,000	50,601	26,498
Maine Central	1,216	916,168	404,969	1,321,137	275,152	12,240	836,758	1,448,468	100.63	8,999	75,999	84,631	454,988
Md., Del. & Va.	82	64,510	41,562	106,072	25,097	590	71,186	108,758	99.94	65	1,733	1,668	36,107
Michigan Central	1,861	4,003,212	1,821,489	5,824,701	1,423,635	55,209	2,245,485	4,743,985	74.17	1,651,828	180,000	1,471,634	1,810,167
Mineral Range R. R.	101	36,242	280	36,522	9,887	388	30,266	31,453	151.91	20,567	5,000	25,567	24,180
Minneapolis & St. Louis R. R.	1,646	847,838	771,888	1,619,726	262,739	8,914	520,630	1,293,372	88.57	131,272	48,557	82,586	449,818
Minneapolis, S. P. & S. Ste. Marie	4,243	2,555,031	771,888	3,326,919	601,488	20,930	1,483,685	3,259,374	74.61	697,320	187,561	509,410	1,343,840
Mississippi Central	164	45,952	27,096	73,048	31,542	1,019	67,547	85,433	111.40	8,749	14,000	11,022	84,713
Missouri & Ark.	365	66,272	39,497	105,769	38,649	1,774	67,547	85,433	111.40	8,749	14,000	11,022	84,713
Mo. Kans. & Tex. R. R.	1,713	1,912,881	738,928	2,651,809	524,529	9,905	81,611	2,250,605	86.26	593,373	89,799	453,417	1,262,808
Mo. Kans. & Tex. of Texas	1,796	1,217,688	688,742	1,906,430	314,595	24,618	918,785	1,552,574	76.40	479,339	47,838	430,882	949,272
Missouri, Okla. & Gulf	332	84,212	16,872	101,084	50,764	2,299	62,874	165,049	153.78	57,721	8,500	66,271	58,175
Mo. Pacific	7,108	5,132,687	1,733,989	6,866,676	1,643,726	86,569	3,239,634	6,522,376	88.46	850,835	262,745	588,058	2,374,257
Montour R. R.	54	107,843	11,107	118,950	30,303	70,747	6,336	136,278	120.02	25,735	2,286	23,449	31,785
Mobile & O.	997	927,359	160,202	1,087,561	439,350	28,902	644,992	1,321,217	113.92	161,476	55,175	106,301	226,529
Monongahela Ry.	108	260,900	20,592	281,492	48,416	97,671	8,583	195,664	70.91	80,272	5,000	75,272	55,077
Monongahela Connecting	6	.....	.....	.....	38,073	511	44,477	109,685	111.37	11,200	1,747	12,448	7,603
Morgan, Lou. & Texas R. R. & S. Co.	400	431,269	185,008	616,277	150,599	7,096	226,166	491,732	74.36	169,517	31,034	138,346	109,742
Nash, Chatt. & St. L.	1,247	949,123	419,493	1,368,616	218,547	32,099	719,015	1,375,528	94.19	84,842	50,000	34,842	170,236
Nevada Northern	168	180,724	7,984	188,708	25,544	859	37,292	91,390	62.82	54,072	18,323	35,748	36,461
New Orleans & N. E.	399	317,810	131,270	449,080	53,400	10,130	233,835	460,006	82.93	94,674	28,357	66,317	176,598
New Orleans Great Northern	284	118,482	47,264	165,746	33,338	2,538	106,237	201,778	116.56	42,670	9,000	40,074	45,498
New Orleans, Texas & Mexico	191	99,208	39,300	138,508	39,141	2,720	65,285	150,676	103.51	5,102	10,000	15,102	26,531
New York Central	6,095	14,925,016	8,053,529	22,978,545	3,341,484	215,044	10,008,599	20,250,994	76.88	6,080,833	191,621	6,280,793	11,193,363
New York, Chicago & St. L.	573	1,522,812	209,595	1,732,407	337,494	23,798	758,026	1,401,306	78.15	391,543	55,706	336,479	373,537
New York, N. H. & Hart.	1,965	4,650,270	3,815,623	8,465,893	1,292,203	40,728	4,222,904	7,766,390	68.18	1,238,511	268,000	968,967	2,888,279
N. Y., Ont. & Western	569	530,567	236,034	766,601	165,140	8,275	455,360	838,801	90.61	88,592	27,000	61,592	179,562
N. Y., Phila. & Norfolk	121	468,505	115,496	583,999	194,078	8,223	332,478	595,026	94.25	36,283	16,521	19,763	47,222
N. Y., Susq. & Western	135	224,192	56,292	280,484	37,024	1,561	183,952	323,031	91.43	26,508	37,111	10,717	132,249
Newburgh & South Shore	7	.....	.....	.....	24,853	.....	67,848	128,305	94.08	8,063	8,816	753	20,987
Norfolk & Western	2,088	4,198,964	1,009,301	5,208,265	669,389	38,394	2,243,017	107,588	82.19	973,504	260,000	713,457	1,609,817
Norfolk Southern	967	573,218	150,799	724,017	461,266	7,548	322,643	1,099,999	102.74	12,657	15,969	28,681	25,995
Norfolk Pacific	6,567	5,721,082	1,724,318	7,445,400	1,817,675	63,502	3,343,328	6,803,426	84.55	1,242,362	601,371	638,747	1,407,188
Northern Alabama	112	61,603	11,320	72,923	79,346	1,354	29,609	101,309	89.80	8,091	3,400	4,692	16,811
Northern Pacific	507	305,078	246,360	551,438	75,646	5,763	280,390	12,233	77.62	137,135	21,972	115,117	66,176
Oregon Short Line	2,347	2,200,090	652,616	2,852,706	680,030	15,071	918,655	88,180	71.93	551,496	75,251	475,396	228,217
Ore-Wash. R. R. & Nav.	2,070	1,509,202	607,288	2,116,490	307,690	29,824	1,019,030	1,884,739	82.47	400,369	113,614	286,650	148,556

REVENUES AND EXPENSES OF RAILWAYS

MONTH OF JUNE, 1919—CONTINUED

Name of road.	Average mileage operated during period.	Operating revenues				Operating expenses			Operating ratio.	Net from railway operation.	Railway tax accruals.	Operating income (or loss).	Increase (or decr.) comp. with last year.
		Freight.	Passenger.	Total.	Maintenance of way and structures.	Equip-ment.	Traffic.	Trans-portion.					
Fanhandle & Santa Fe.....	772	\$390,625	\$91,282	\$506,688	\$77,775	\$195,870	\$4,197	\$232,875	102.73	\$13,871	\$16,605	-\$30,606	\$82,819
Gen. R. R. West.....	1,754	6,710,623	1,864,230	8,574,853	1,146,197	2,827,573	68,702	6,238,011	80.51	1,800,016	341,666	1,458,350	2,895,044
Gen. R. R. East.....	5,361	18,939,797	9,745,161	28,684,958	6,221,164	9,088,151	263,083	12,568,246	94.55	1,694,125	941,666	752,459	8,078,238
Gen. R. R. Union.....	41	82,024	8,084	90,108	3,031	5,082	65	34,009	46.28	49,969	1,800	48,169	7,518
Gen. R. R. Union.....	19	26,419	2,487	28,906	1,098	10,982	65	34,009	46.28	49,969	1,800	48,169	7,518
Gen. R. R. Union.....	2,232	2,128,148	480,103	2,608,251	268,647	553,520	36,956	1,228,192	73.25	760,570	49,822	709,950	876,358
Gen. R. R. Union.....	1,127	5,823,455	899,008	6,722,463	989,862	1,309,161	36,735	2,602,467	66.63	332,238	43,228	2,88,589	2,688,589
Gen. R. R. Union.....	224	1,708,000	208,717	1,916,717	375,370	767,602	14,272	753,612	94.32	118,019	75,500	42,519	139,301
Gen. R. R. Union.....	66	90,685	9,692	100,377	11,303	48,519	1,355	59,529	154.11	61,167	11,268	72,539	36,168
Gen. R. R. Union.....	71	.....	.....	56,444	6,800	12,133	370	37,244	101.69	956	1,050	2,006	30,005
Gen. R. R. Union.....	103	84,966	3,527	88,493	16,534	64,793	565	32,845	132.37	28,872	956	29,828	15,881
Gen. R. R. Union.....	2,883	4,979,053	2,138,248	7,117,301	1,082,811	2,333,559	86,749	3,250,121	103.00	766,867	241,029	525,838	2,310,005
Gen. R. R. Union.....	204	25,318	4,463	29,781	82,008	16,286	5,784	180,594	152.49	62,224	1,808	44,163	20,983
Gen. R. R. Union.....	21	139,017	.....	203,993	29,226	5,784	978	35,138	66.04	69,271	9,000	60,271	49,983
Gen. R. R. Union.....	81	338,269	288,711	626,980	38,855	94,351	3,812	241,523	58.86	286,578	11,810	274,767	71,268
Gen. R. R. Union.....	255	52,541	85,232	137,773	43,749	22,784	274	47,619	134.78	29,658	3,303	32,961	19,764
Gen. R. R. Union.....	415	220,855	107,069	327,924	46,733	91,454	7,032	186,584	84.74	62,224	19,558	42,664	197,674
Gen. R. R. Union.....	258	255,889	66,444	322,333	39,207	40,485	1,308	131,690	66.73	111,287	8,810	102,476	169,806
Gen. R. R. Union.....	548	257,372	142,551	399,923	65,916	75,916	4,544	141,833	71.14	122,927	18,460	112,827	238,571
Gen. R. R. Union.....	9	.....	435	211,624	54,273	19,886	725	215,051	139.98	84,618	8,300	92,918	38,029
Gen. R. R. Union.....	476	3,984,595	1,977,975	5,962,570	918,713	1,228,957	48,267	2,285,209	74.15	1,618,223	271,556	1,346,667	1,860,363
Gen. R. R. Union.....	134	131,164	15,659	146,823	20,806	17,427	1,765	59,241	74.01	38,795	1,629	37,161	51,128
Gen. R. R. Union.....	939	818,561	193,759	1,012,320	91,816	227,951	13,952	331,553	68.52	320,857	37,770	282,988	390,661
Gen. R. R. Union.....	814	400,090	125,578	525,668	122,859	173,321	10,836	346,648	119.72	111,260	21,000	132,260	151,941
Gen. R. R. Union.....	732	204,215	98,960	303,175	100,384	107,291	5,739	193,105	131.90	103,695	15,000	118,695	164,633
Gen. R. R. Union.....	3,563	1,886,869	1,205,622	3,092,491	380,983	640,169	54,420	1,337,410	81.83	609,792	135,000	474,792	959,739
Gen. R. R. Union.....	6	.....	73,452	73,452	8,802	4,078	180	38,359	73.19	19,689	9,250	10,439	48,947
Gen. R. R. Union.....	11	26,854	57,994	84,848	3,785	15,595	284	40,139	105.72	3,321	9,250	13,071	34,286
Gen. R. R. Union.....	6,982	5,785,769	3,295,905	9,081,674	1,874,291	1,890,666	92,291	5,192,888	94.98	495,132	338,672	146,460	649,465
Gen. R. R. Union.....	278	78,627	37,342	115,969	27,424	27,424	2,284	88,588	126.66	33,629	9,000	42,645	35,923
Gen. R. R. Union.....	7,049	9,184,591	3,692,046	12,876,637	2,483,411	5,025,938	58,267	7,285,209	72.26	3,871,843	644,607	3,225,202	4,842,464
Gen. R. R. Union.....	554	415,209	134,717	549,926	80,834	83,455	5,804	212,103	65.38	21,110	59,200	151,905	64,647
Gen. R. R. Union.....	.....	677,556	63,169	740,725	78,491	71,124	10,469	580,235	93.95	47,476	10,841	36,635	105,822
Gen. R. R. Union.....	156	75,136	6,212	81,348	19,776	8,846	1,791	31,073	69.00	29,391	4,012	25,380	27,183
Gen. R. R. Union.....	23	92,395	93,308	185,703	23,443	30,973	1,533	108,785	82.61	13,658	17,000	19,556	30,259
Gen. R. R. Union.....	292	118,650	60,913	179,563	18,043	18,043	1,378	44,096	128.39	23,635	4,800	28,435	19,651
Gen. R. R. Union.....	40	.....	.....	669,072	165,620	226,188	279	434,824	121.74	165,533	10,428	175,961	168,934
Gen. R. R. Union.....	3,614	5,497,059	2,098,719	7,595,778	1,172,218	1,548,392	42,459	2,277,938	77.06	2,716,046	280,965	2,435,081	1,011,510
Gen. R. R. Union.....	171	168,606	83,385	251,991	269,062	42,939	2,226	92,777	77.84	59,611	9,242	50,368	121,157
Gen. R. R. Union.....	523	963,971	60,227	1,024,198	1,136,425	125,920	4,616	394,244	64.17	407,095	35,700	371,395	390,135
Gen. R. R. Union.....	2,503	2,747,163	1,010,558	3,757,721	4,009,783	690,030	55,649	1,956,232	87.11	516,480	107,829	408,651	750,538
Gen. R. R. Union.....	35	138,562	196,771	335,333	35,374	40,490	1,862	134,123	43.60	292,929	6,379	286,545	136,972
Gen. R. R. Union.....	361	277,300	716,488	993,788	218,085	282,388	8,788	444,725	93.74	66,068	49,888	16,168	216,674
Gen. R. R. Union.....	328	144,708	35,609	180,317	30,096	28,397	754	114,024	95.39	8,869	9,541	68,840	139,529
Gen. R. R. Union.....	707	931,974	89,776	1,021,750	161,338	373,258	16,003	429,867	92.30	86,637	43,200	43,437	533,542
Gen. R. R. Union.....	1,011	891,381	204,699	1,096,080	248,809	202,133	1,745	335,555	73.55	300,360	48,415	251,945	183,525
Gen. R. R. Union.....	133	83,872	78,167	162,039	24,178	38,848	3,248	41,295	87.73	21,940	7,500	14,440	18,824
Gen. R. R. Union.....	511	1,194,282	50,585	1,244,867	216,863	246,675	5,581	435,702	68.35	433,255	55,000	378,255	472,805
Gen. R. R. Union.....	1,381	1,274,014	377,968	1,651,982	291,056	437,023	15,975	646,265	82.69	300,367	63,990	236,376	822,562
Gen. R. R. Union.....	194	53,321	24,806	78,127	17,819	17,819	462	43,269	112.66	10,923	4,156	15,079	21,137
Gen. R. R. Union.....	34	123,726	167	123,893	22,541	18,112	224	23,048	.....	72,354	3,872	68,482	23,550
Gen. R. R. Union.....	141	889,526	356,405	1,245,931	263,428	333,808	10,638	568,924	119.91	94,520	65,188	29,332	82,299
Gen. R. R. Union.....	512	3,575,504	1,098,359	4,673,863	632,426	1,340,294	81,804	2,659,152	85.80	702,172	145,234	556,938	305,269
Gen. R. R. Union.....	30	1,506,066	318,064	1,824,130	361,097	341,683	30,499	930,430	89.73	198,195	93,000	105,195	193,529
Gen. R. R. Union.....	377	1,472,799	273,910	1,746,709	481,453	290,628	12,839	610,864	77.73	417,651	97,692	319,959	438,743
Gen. R. R. Union.....	8,635	53,515,124	20,919,676	74,434,800	11,604,404	19,069,732	837,476	29,546,861	79.54	16,040,697	3,253,363	12,787,334	5,282,441
Gen. R. R. Union.....	93	652,681	550,377	1,203,058	163,699	250,991	17,553	509,787	74.29	343,295	51,000	292,295	8,092
Gen. R. R. Union.....	639	1,825,810	421,431	2,247,241	703,539	808,862	41,448	1,486,455	129.63	712,161	96,000	808,161	553,790
Gen. R. R. Union.....	177	790,816	1,025,066	1,815,882	266,422	284,721	7,330	982,003	80.45	376,484	72,000	304,484	181,521
Gen. R. R. Union.....	4,857	20,868,648	9,997,429	30,866,077	4,672,983	6,916,224	351,453	14,239,935	82.36	5,793,094	1,240,000	4,553,094	409,006
Gen. R. R. Union.....	90	.....	18	796,656	204,345	262,933	6,708	742,995	163.71	507,620	169,923	677,543	107,097

SIX MONTHS OF CALENDAR YEAR, 1919

Traffic News

The grain elevator at Port Colborne, Ont., owned by the Canadian Government, was destroyed by fire on August 9, with the loss of 8 lives. The capacity of the elevator was 2,000,000 bushels; estimated loss \$1,800,000.

The executive committee of the National Industrial Traffic League will appear before the House committee on interstate and foreign commerce in behalf of the principles embodied in the Esch-Pomerene bill and to urge the passage of the Cummins bill restoring rate making power to the Interstate Commerce Commission.

The Traffic Club of Cleveland, (Ohio), has endorsed the resolutions with respect to the solution of the railroad problem which were recently adopted by the traffic clubs of Chicago, except as to those clauses of the Chicago resolutions which recommend that the Esch-Pomerene bill be amended so that the Interstate Commerce Commission will not have jurisdiction over traffic wholly water-borne.

Car loading reports compiled for the Central Western region during the month of July show that 57,706 cars of grain were loaded as compared with 58,842 cars during the corresponding month last year, or a decrease of 1.9 per cent. During the month of July the lines serving this region also loaded 80,579 cars of coal as compared with 123,002 cars during the corresponding period last year, a decrease of 34.5 per cent. During the same period 41,443 cars of live stock were loaded as compared to 42,600 cars during the corresponding month last year making a decrease of 2.7 per cent.

The National Lumber Manufacturers' Association, composed of 12 regional lumber manufacturing groups and comprising practically the entire lumber manufacturing industry, recently sent a statement to the House Committee on Interstate and Foreign Commerce advocating the passage of the Cummins' bill, providing for the return to the Interstate Commerce Commission of the power over freight rates which it possessed prior to government control. The statement also advocates the considering of this measure apart from any general plan for the solution of the railway problem which may be adopted.

Many rates, obsolete and no longer in use, are included in various individual and agency freight tariffs and should properly be canceled, according to the Kansas City (Mo.) District Freight Traffic Committee. Accordingly consideration is to be given to the cancellation of 572 of these obsolete rates by this committee on September 2. An investigation has recently been conducted and it was found that this number of tariffs have not been in use for the past 12 months, and that there is no apparent prospective use for them in the future. However, the applications seeking authority to cancel any or all of these rates will provide that they are to be restored by publication on one day's notice (subject to any advances or reductions which may be made in the meantime) should any movement develop thereunder within one year from the date of cancellation.

J. H. Dyer, general manager of the Southern Pacific and the Western Pacific, has issued an appeal to shippers to resume at once the full loading of cars, so as to enable the carrier to move the crops. Peace products exceed those of the war period, and the world is in need of all these commodities just as badly as it needed the crops last year, or the year before. Shippers are relaxing their efforts, believing apparently that the railroads have a surplus of cars. This is not the fact. New cars have not been available during the war. The demands of peace equal, if not exceed the necessities of war. About 500,000 tons of barley is being moved out of California now. The fruit crop is one of the heaviest in history; and 28,000 cars will be needed to move the wine grapes. In the month of June Mr. Dyer found that if all freight cars

had been loaded to 10 per cent above their marked capacity, the traffic of the month could have been carried in 2,000 fewer cars than were actually used.

According to the Railroad Administration a report on overseas traffic to the Director General of Railroads, 6,223 cars of commercial export freight were received at North Atlantic ports for the week ended August 6, 1919, as compared with 1,345 cars for the same week in 1918. This shows an increase of 4,878 cars or 363 per cent for the first week of August, 1919, as against the corresponding period last year. The deliveries to ships for the week ended August 6, 1919, increased 5,291 cars or 354 per cent. On August 6, 1919, there were 10,013,658 bushels of grain in elevators at North Atlantic ports or 50.7 per cent. of the total elevator capacity. During the week there were received 4,854,894 bushels of grain, while 5,509,240 bushels of grain were cleared. This shows an excess of deliveries over receipts of 654,346 bushels. At South Atlantic and Gulf ports there were 4,408,104 bushels of grain in elevators as of August 5, representing 36.7 per cent of the total elevator capacity, as against 31.5 per cent of capacity for the previous week.

Prince of Wales in Canada

The Canadian Pacific, which is preparing a special train for the use of His Royal Highness, the Prince of Wales, in his tour through Canada, announces the Prince's probable itinerary from August 21 to October 30. He will occupy the private car "Killarney" of Lord Shaughnessy, chairman of the Canadian Pacific. The other cars in the train will be the "Cromarty," the private car of Commander J. K. L. Ross; the compartment car "Empire," and the dining car "Canada"; sleeping cars "Carnavan" and "Chester," tourist car "Chinook" and two baggage cars. The condensed itinerary is as follows:

Quebec, August 21-24	Crow's Nest Pass
Toronto, August 27	Macleod, October 2
Ottawa, September 1	Medicine Hat, October 3
North Bay, September 1	Moose Jaw, October 4
Cobalt, September 2	Regina, October 4 (duck shooting)
Timmens, September 3	Ou'Appelle, October 10
Sault Ste. Marie, September 4	Portage La Prairie, October 10
Nipigon	Winnipeg, October 10
Port Arthur, September 8	Fort William, October 11
Winnipeg, September 9	Biscotasing (moose hunting)
Saskatoon, September 11	Toronto
Edmonton, September 12	Hamilton, October 18
Calgary, September 13	Niagara Falls, October 20
Banff, September 17	Brantford, October 20
Lake Louise	Stratford, October 21
Field	Woodstock, October 22
Revelstoke, September 20	Chatham, October 22
Vancouver, September 22	London, October 22
Victoria, September 23	Windsor, October 23
Vancouver, September 29	Galt, October 22
New Westminster	Toronto, October 25
Kettle Valley R. R.	Kingston, October 27
Penticton, September 29	Brockville, October 27
Nelson, October 1	Montreal, October 27
Lake Kootenay	Ottawa, October 31

The length of the journey outlined is about 8,800 miles. In deference to the implied wish of the King that there should be no undue ostentation during any part of the trip, the cars, with the exception of the two first named, will be ordinary Canadian Pacific stock; though some of them will be brand new and as spotless and beautiful as the car-builders can make them.

Division of Labor on the P. R. R.

"Pick handle" Mulcahey, who has been a frequent visitor to the Curb Market since the Director-General took over operation of the railroads, made one of his regular trips yesterday from Jersey City, where he is a car inspector for the Pennsylvania Railroad.

Having in mind the inspector's advanced age and rapidly failing strength, his broker remarked:

"Mul, you're getting pretty old and feeble, aren't you, to be bending over and hammering wheels all day."

"Shure, me hearin' is still good," replied Mul.

"Your hearing?" What's that to do with hammering wheels?"

"Uncle Sam showed 'em how to run the railroads. I've got a helper now to do the hammerin'."

"What do you do?"

"I do the listenin'," answered Mul.—*Wall Street Journal*.

Commission and Court News

Interstate Commerce Commission

Wasteful Service by Tap Lines

The commission, in a decision issued June 30, 1919, on two cases submitted May 1, 1918, condemns certain tariffs by which short railroads, called "tap lines," carrying lumber shipped by affiliated mills, were allowed proportions of through freight rates based on long hauls, made for the very purpose of increasing the short line's proportion, when the actual necessary haul was only about one mile. The "tap lines" involved were the Prescott & Northwestern and the Ouachita & Northwestern, situated in Arkansas and Louisiana; and the trunk line was the Missouri Pacific. The decision is by Commissioner Eastman.

The first case had to do with shipments from a mill at Prescott, Ark., about 48 miles north of Texarkana. The mill is about one mile from the Missouri Pacific; but the lumber was shipped 29 miles northwest to Tokio, then a short distance southwest by the Memphis, Dallas & Gulf and there delivered, at Nashville, Ark., to a branch of the Missouri Pacific; and then (if the car were destined northward) it was hauled by the Missouri Pacific back through Prescott to destination. The total side-line haul was 76 miles, constituting a waste of 75 miles.

The other case was that of the Ouachita & Northwestern, which had mills at Clarks, La., on the Missouri Pacific and at Standard, La., 10½ miles south of Clarks. In this case the tap line had a track parallel to the Missouri Pacific between Clarks and Standard; and the custom was to send all shipments over this "tap line" when thereby a ten-mile haul could be secured; shipments from Clarks going northward were hauled about 21 miles unnecessarily, and those going southward from Standard were hauled a similar unnecessary distance.

According to decisions of the commission in "tap line" cases heretofore considered, the proper allowance to the tap line for a haul of one mile is held to be \$2.50 a car, whereas on the 76-mile haul a carload of 30 tons gave the tap line \$21; and on the 10½-mile haul \$18 was taken.

It appears that while the Missouri Pacific is in the hands of the Government, the wasteful practices here described are suspended; but the tariffs are still in force, and so the commission deems it proper to issue this decision, preparatory to the discontinuance of federal control.

The decision holds that a "tap line" is entitled only to just compensation for the actual and reasonably necessary services performed by it; and the distances must be measured by the direct route of the movement toward the final destination.

As to the 10½-mile side line between Clarks and Standard, no objection is made to the sending of lumber over that line if it is in the direction of its final destination; as for example, shipments from Clarks, going south, or from Standard, going north.

Court News

Injury to Passenger by Baggage in Aisle

A railroad permitted baggage to remain in the aisle of a car, which was so crowded that many passengers were standing in the aisle. A woman, making her way through the crowd, fell over the baggage and was injured. It did not appear that the railroad was unable to place the baggage where it would not endanger passengers. The Minnesota Supreme Court holds that it could not say that it conclusively appeared that the railroad was free from negligence, although the amount of travel on this day was so unprecedented that it could not have been foreseen or properly provided for.—*Pletzky vs. Great Northern (Minn.)* 169 N. W. 715. Decided December 13, 1918.

Foreign Railway News

French Plan Two Railroads in Vosges Mountains

A Havas despatch from Paris, dated August 10, says that Albert Claveille, minister of public works, has introduced a bill in the Chamber of Deputies providing for the construction of two new railroads through the Vosges Mountains.

Franco-Spanish Railroad

The first section of the Trans-Pyrenean Railroad, between Ripoll and Ribas, about five miles south of the Franco-Spanish border, was inaugurated recently. The ceremony was attended by Francisco Cambo, former Minister of Public Works, and Senor Cayera, representing the Spanish Ministry of Development, and the French Deputy Emmanuel Brousse.

South Australian Railway Extension

The Railways Commissioner of South Australia at Adelaide advertised for bids to be received not later than May 20 for the construction of a line of 5 ft. 3 in. gage railway from Long Plains to Snowtown, South Australia, a distance of 41 miles. The work is to be completed within 18 months from the date of contract.

Although the time was too short for American railway contractors to bid on the actual construction of the line, Commerce Reports suggests that American manufacturers of railway supplies and equipment should send their catalogues and export price lists to C. J. Boykett, Secretary, Railways Commissioner, Adelaide, South Australia.

British Railroad Owners Organize

Press despatches to the Journal of Commerce, New York, report that the various associations of English railway stockholders are merging into the English Railway Stockholders' Protective Association, which will be maintained by nominal subscriptions on a pro rata basis according to members' holdings. The association will take an unbiased stand, neither in favor of nor against nationalization, its purpose being the safeguarding of stockholders' interests in the final settlement of matters arising from Government control.

The main questions to be dealt with are the depreciation of road and rolling stock and the greatly enhanced costs of operation.

The total holdings of railway stocks in the United Kingdom represent a face value of 1,350,000,000 distributed among 1,500,000 stockholders.

Exports of Locomotives in June

Exports of locomotives in June were considerably less than in May, but slightly greater than the totals for April. The exports in June totaled 78 of a value of \$2,356,909, of which over half in point of value were consigned to Russia in Asia. The figures as compiled by the Division of Statistics of the Bureau of Foreign and Domestic Commerce are as follows:

Countries	Number	Dollars
France	3	82,184
Russia in Europe	20	265,065
Spain	1	6,800
Canada	11	68,510
Cuba	2	29,650
Brazil	6	331,450
China	4	200,400
British India	1	22,850
Russia in Asia	30	1,350,000
Total	78	2,356,909

Exports of Cars in June

Exports of freight cars in June were double those of May and several times in excess of those of any previous month of 1919. The June exports totaled 5,055, valued at \$13,675,186, as compared with 3,008 freight cars exported in May, valued

at \$6,268,078. The totals in detail, as well as figures of passenger car exports, compiled by the Division of Statistics of the Bureau of Foreign and Domestic Commerce, are as follows:

Countries	Passenger		Freight and other	
	Number	Dollars	Number	Dollars
France	..	..	3,549	11,085,700
Italy	..	..	1,050	1,801,800
Russia in Europe	..	..	200	320,000
Canada	7	168,329	121	104,159
Mexico	..	..	29	16,905
Cuba	4	5,600	4	10,982
China	..	..	100	325,000
British India	..	..	2	10,640
Total	11	173,929	5,055	13,675,186

Railway Electrification in Switzerland

The Engineer of London states that Swiss engineering experts are pressing for the immediate electrification of the railways. The Swiss Minister of the railways has stated that it is not wise to wait the return of normal conditions before electrifying the Swiss railways, because the coal scarcity will probably last for many years. There is available in Switzerland about 4,000,000 hp. electric energy calculated on a basis of an average working day of fifteen hours. On January 1, 1914, not more than about 500,000 hp. were actually used. The new power stations built or in process of construction from January 1, 1914, to December 31, 1918, would supply another 200,000 hp. Thus there were at the beginning of this year about four-fifths of the total available water supply still undeveloped. The electrification of the Gothard railway is still going on, an extra credit of 4,500,000 francs having been voted for it by the Swiss Parliament. The line between Berne and Brigue is already worked by electricity.

Exports of Car Wheels and Axles in June

Exports of car wheels and axles in June were more than 3½ times as large as in May and nearly three times as large as in April, the best previous month this year. The June exports totaled \$2,740,479, as compared with \$769,733 in May and \$946,304 in April. Of the June total over half represented shipments to Italy, while large shipments were made also to Japan, Russia, in Asia and France. The detailed figures as compiled by the Division of Statistics of the Bureau of Foreign and Domestic Commerce are as follows:

Countries	Dollars	Countries	Dollars
France	261,920	Peru	5,059
Italy	1,368,778	Uruguay	1,825
Netherlands	2,523	Venezuela	160
Canada	10,559	China	1,644
Panama	7,990	Japanese China	164,874
Mexico	18,714	British India	15,250
Jamaica	230	Dutch East Indies	1,985
Other British West Indies	420	Japan	486,910
Cuba	8,047	Russia in Asia	356,647
French West Indies	704	Australia	16,085
Dominican Republic	71	Philippine Islands	1,309
Argentina	243	British South Africa	500
Bolivia	252		
Brazil	238		
Chile	7,551	Total	2,740,479

Railway Problem Disturbing Chile

The reported resignation of the Minister of Public Works is the first news received in this country of the recent Cabinet crisis which has taken place in Chile, says Osgood Hardy in an article in the Latin-American section of the New York Sun. It is rather difficult at this distance to know just what is the crux of the situation, but according to the meagre reports that have arrived this action was due to differences with other members of the Cabinet over plans for solving some of the problems of railway administration. These have arisen from a congestion of traffic which the railroads are suffering, a congestion so severe that the Government has been compelled to place an embargo on the export of foodstuffs.

During the war Chile was unable to secure the materials necessary to keep her railroads in good condition, and now that steel can once more be obtained, she is considering various means of rehabilitating her lines. Disagreements as to the best methods of bringing this about have caused what seems to be a ministerial crisis which may result in the resignation of the entire Chilean Cabinet, for as the greater part

of Chile's railways are operated by the Government, railroad troubles are immediately reflected in Government circles.

Shortage of German Rolling Stock

The Technical Supplement to the Review of the Foreign Press (London) publishes an extract from the Kolnische Zeitung of June 15, giving an account of the causes for the shortage of German rolling-stock.

"In the Ruhr district there are renewed complaints as to the 'shortage of wagons.' This expression is generally used to express a state of things for which it is not really appropriate. There seems rather to be a shortage of locomotives to bring the wagons to the places where they are required rather than a shortage of wagons themselves. The terms of the armistice, requiring the surrender of so many locomotives, are responsible for this.

"The Prussian Railway Administration meanwhile has given orders for 2,463 new locomotives, and the engine works are doing their best to deliver them. On the whole they have executed the orders satisfactorily. The reason why the stock of locomotives is not increasing is explained by the bad condition of the old engines, the result being that every week as many come to be repaired as have been sent out from the repairing shops. There is an incontestable shortage of passenger carriages. The Railway Administration has consequently ordered 2,896 coaches and 45,000 freight cars. The total orders given amount to 2,000,000 marks. But even by these orders the stock of locomotives and wagons is brought to its proper level, the whole difficulty is by no means solved. There is not a trained personnel available to enable such a stock of wagons to be utilized as fully as necessary. This problem is rendered more acute by the eight-hour day difficulty, while the abolition of piece-work delays the repairs to the rolling stock. Then there are the constant interruptions to work by elections, meetings and councils. The unsatisfactory state of things in the railway world is another of the 'achievements' of the Revolution."

Condition of Russian Railways

The Technical Supplement to the Review of the Foreign Press (London) publishes an extract from an article by L. Kaplan published in the Wirtschaftsdienst of May 16, in which Mr. Kaplan described the present condition of Russian Railways.

"At the outbreak of war Russia possessed about 83,000 km. of railway line, of which 7,500 km. were in Finland and Poland. There was 30,000 locomotives and 570,000 wagons, or 1 locomotive and 19 wagons to each 2.5 km. of line. According to the statistics published by the transport Commissioner in the Severnaya Communa (January 17), there were on December 1, 1918, only 6,200 locomotives and 120,000 wagons in a serviceable condition, while a further 3,600 locomotives and 145,000 wagons were in need of repair. In the following three months these numbers were considerably reduced, and when Krasin, the new transport commissioner, entered office it transpired that the railways in Russia in Europe possessed only 4,000 locomotives and 95,000 wagons for 60,000 km. of line, or one locomotive and 19.5 wagons for each 15 km. The uninterrupted military operations are using up this small remainder, and unless the general situation changes by July 1, an entire cessation of railway traffic in Russia in Europe may be anticipated owing to the complete destruction of all the rolling-stock.

"Russia is not without means of re-establishing her railway system, or at all events of repairing it in part; but M. Kaplan relates that he has recently visited the railway shops in Moscow, Kursk, Kharkoff, and Melitpol, and found hardly any work going on. In 1914, Russia produced about 800 locomotives in her own shops, but in 1917 this number fell to 170, and in 1918 to about 20. Repairs have completely ceased owing to the lack of suitable tools, material and skilled workmen. The three largest repairing shops during the last four months of 1918 only put 44 locomotives in working order; while in January and February of this year all the shops in Russia only repaired 40 engines, while no repairs of the wagons took place."

Exports of Railway Track Material in June

The exports of rails and switches, frogs, etc., in June were not as great as in May. Of rails, 67,028 tons, valued at \$4,208,872, were exported in June, as compared with exports in May of 76,134 tons, valued at \$4,902,970. The exports of switches, frogs, etc., in June totaled \$1,359,725, as compared with \$1,881,626 in May.

Japanese China and Japan were the largest customers in June, and large shipments were made to France and Belgium.

The figures in detail as compiled by the Division of Statistics of the Bureau of Foreign and Domestic Commerce are as follows:

Countries	Spikes		Steel Rails		Switches, frogs, splice bars, etc.
	Pounds	Dollars	Tons	Dollars	Dollars
Belgium	1,184,499	94,551	7,593	426,703	218,475
Denmark			200	16,880	1,512
France	2,988,075	164,977	8,397	527,483	450,885
Italy			1,959	156,720	152,167
Netherlands			1,315	83,662	31,176
Norway			82	5,350	450
Portugal			1,609	94,036	
Russia in Europe	1,590,200	41,345	355	20,643	12,560
Spain			404	24,670	88
England			278	15,055	2,483
Scotland			49	2,834	272
British Honduras					53
Canada	53,028	1,683	717	41,928	26,806
Costa Rica	14,000	647			
Guatemala	1,400	59			180
Honduras	33,000	1,228	860	42,581	96
Nicaragua	5,000	228			323
Panama					2,627
Salvador	28,000	1,872			11
Mexico	190,781	11,693	2,093	86,948	36,265
Miquelon, Langley, etc.	1,218	148			
Newfoundland and Labrador	960	64	12	638	2,281
Jamaica			220	12,089	1,005
Other British West Indies			19	1,579	
Cuba	450,146	13,021	4,232	226,677	53,435
French West Indies	7,600	337	222	10,625	898
Haiti	55,000	2,068	2	200	75
Dominican Republic	8,000	488	994	50,782	4,855
Argentina			4	360	
Bolivia					3,092
Brazil	397,930	19,219	1,513	98,610	33,932
Chile	4,000	235	567	49,290	19,843
Colombia	48,400	1,897	972	54,045	2,046
British Guiana	1,000	50			24
Peru			771	43,281	18,115
Uruguay					1,248
Venezuela					938
China	18,116	1,225	3,194	233,937	6,291
Japanese China	1,218,954	55,927	12,115	900,970	100,932
Chosen			50	3,061	257
British India			562	48,404	1,885
Dutch East Indies	144,400	12,700	2,360	123,376	19,534
Hongkong	16,632	808	202	14,024	906
Japan	1,232,664	56,179	12,689	768,670	130,395
Australia	22,000	1,260			14,064
Philippine Islands	852	25	14	870	3,828
Belgian Congo			40	2,791	2,660
British South Africa					491
Portuguese Africa	12,088	752	363	19,100	266
Total	9,727,943	484,466	67,028	4,208,872	1,359,725

Equipment and Supplies

Locomotive Deliveries Week Ended August 2

The following new locomotives were shipped during the week ended August 2:

Works	Road	Number	Type
American	Virginian	3	USRA Mallet.
		3	
		1	Mallet.
P. & R.		4	Santa Fe.
A. T. & S. F.		1	Santa Fe.
P. L. W.		4	USRA S. F.
P. L. W.		4	USRA Mikado.
T. & P.		1	Santa Fe.
S. P.		3	Santa Fe.
A. & V.		1	Mikado.
A. & V.		1	USRA Pacific.
B. & O.		1	Mallet.
P. L. W.		21	
Baldwin		24	
Total		24	

Sale of War Department's Surplus Material

The Director of Sales, of the War Department, announces that the Surplus Property division of the office of the director of purchase and storage, War Department, is offering for sale under sealed proposals 46,037 lanterns, located at Jeffersonville, Ind., bids for which will be opened on August 27, by the surplus property officer, Jeffersonville. These lanterns are 11 inches in height and hold $\frac{1}{2}$ pint of oil. No bid for less than 180 lanterns will be considered.

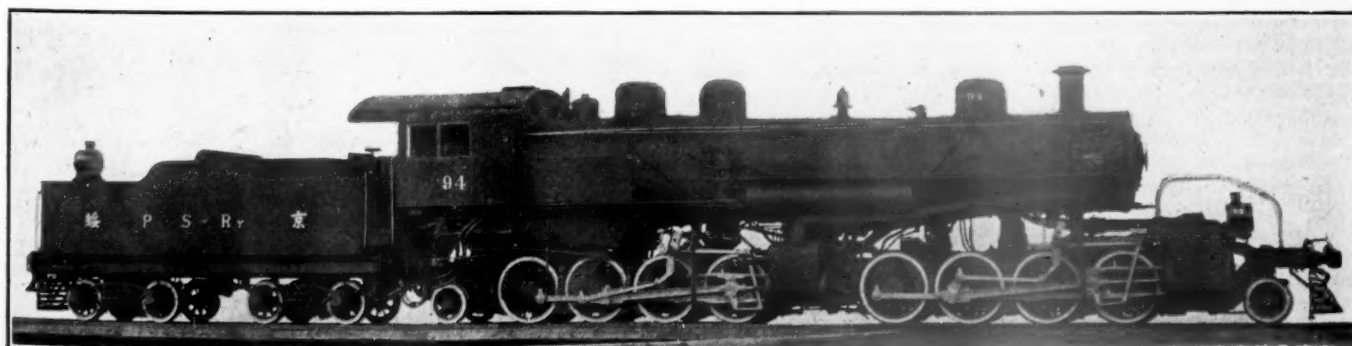
Bids are also wanted as follows: For 15,492 new shovels located at Chicago, bids for which will be opened by the surplus property officer at Chicago, on August 29. These shovels are of three types, 996 "D" handle, round blade; 7,700 long-handle, square blade, and 6,796 long-handle, round blade. All are unpolished. No bid for less than 10 dozen of one style will be considered.

For 38,283 axe handles located at Lewistown, Pa., bids for which will be opened by the surplus property officer at Philadelphia, Pa., on September 2. These are all new and are 36 inches long. No bids for less than 100 dozen will be considered.

For 19,863,697 brass rivets located in warehouses at Boston, Mass., bids for which will be opened by the surplus property officer at Boston on September 3. These rivets consist of three lots as follows: 12,531,877, 4-16 inches long; 5,377,820, 5-16 inches long, and 1,954,000, 6-16 inches long. They are packed a thousand to a container and no bid for less than 50,000 rivets will be considered.

Passenger Cars

THE BUTLER COUNTY has ordered a Unit car from the Unit Railway Car Company, Boston, Mass., for September 1 delivery.



Mallet Locomotive Recently Built by the American Locomotive Company for the Pekin-Kalgan Railway of China

This locomotive has 20 and 32 by 26 in. cylinders; a weight on drivers of 241,000 lb.; a total weight in working order, engine only, of 293,000 lb., and a tractive effort of 66,500 working simple and 55,000 compound. It is of standard gage and is superheated.

Supply Trade News

George J. Lynch has been appointed sales manager for the **Youngstown Steel Car Company**, with headquarters at Youngstown, Ohio.

The **Condron Company**, engineers, Chicago, has opened a branch office in the Central Saving & Trust Building, Akron, Ohio, in charge of **C. L. Post**, vice-president.

J. L. Canby has been appointed district manager of sales of the **Chicago Pneumatic Tool Company**, Chicago, with offices at Chicago, succeeding **Nelson B. Gatch**, who has been transferred to the New York office.

A. E. Braun, president of the Farmers Deposit National Bank, Pittsburgh, Pa., has been elected a director of the **Pressed Steel Car Co.**, New York, to fill the vacancy caused by the death of T. H. Given.

F. O. Slutz has been appointed manager of the railway sales department of the **B. F. Goodrich Rubber Company**, Akron, Ohio, succeeding **C. M. Woodruff**, who has resigned to accept a position with the Akron Board of Education. Mr. Slutz was born on April 29, 1883, and received a high school education. He entered the service of the B. F. Goodrich Rubber Company, on October 24, 1901. In 1909, he served as a clerk in the pneumatic tire sales department and the following year was transferred to the railway sales department, where he served in various positions, giving most of his attention in recent years to railway sales work exclusively, until his appointment, effective July 1, as manager of the same department. Mr. Slutz will have his headquarters at Akron, Ohio.



F. O. Slutz

James M. Monroe has resigned as representative of the Southeastern territory of the **Hunt-Spiller Manufacturing Corporation**, Boston, Mass., to become vice-president of the **Harry Vissering Company**, Chicago, and vice-president of the **Charles R. Long, Jr., Company**, Louisville, Ky.

The **Light Railway Equipment Company**, Philadelphia, Pa., manufacturers of frogs, switches, portable track, cars and electric locomotives, has been taken over and is now controlled by the **L. B. Foster Company**, Pittsburgh, Pa. **B. H. Behrens** has been made general manager of sales with offices at Pittsburgh and **H. A. Ellis** has been appointed general manager of a recently completed factory at Holmes, Pa. Branch offices have been opened in the Commercial Trust Building, Philadelphia, and the Tribune Building, New York.

The **Chicago Pneumatic Tool Company**, Chicago, is now erecting a 10-story office building at 6-8 East Forty-fourth street, New York, in which will be housed its general offices now at Chicago. The new building will be completed early in 1920. The structure will be of steel, brick and limestone construction and will be occupied solely by the offices of the company. The ground floor will contain a permanent exhibition room and display of its pneumatic and electric drills and other tools, gas engines, air compressors, etc. A completely equipped service station will also be maintained. The

six American plants and 26 sales and service branches will be directed from New York. A sales and service organization will be maintained in Chicago on a more extensive scale than formerly.

Alexander Chapman, assistant district sales manager of the Rail Joint Company, with headquarters at Chicago, has been promoted to district sales manager with the same headquarters, succeeding **Geo. C. Isbester**, who has resigned to go with another company. Mr. Chapman was born in 1880 at Jersey City, N. J., and received his education in the Stevens Preparatory School and the Stevens Institute at Hoboken, N. J., from which institution he graduated in 1902. He entered the engineering department of the Rail Joint Company at Newark, N. J., in the following year. After a short time in that department he entered the mills of the company as an inspector and served in that capacity at Delaware, N. J., Buffalo, N. Y., and Columbus, Ohio, returning to the headquarters office in 1908 to take a position in the order department. In 1914, he was transferred to the Chicago office as assistant district sales manager, in which position he remained until his recent promotion to district sales manager.



A. Chapman

Trade Publications

STROMBERG AUTOMATIC TIME SYSTEM.—The Stromberg Electric Company, Chicago, Ill., has issued a folder describing its automatic time systems, in which a master clock controls various pieces of secondary equipment, such as secondary clock for indicating time in various places, in-and-out time-recorder for recording time of arrival and departure of each employee, program instrument for automatically blowing whistles, ringing bells, etc., office time stamp for stamping time and date of receipt of letters and other similar devices.

OWEN BUCKETS.—Two booklets descriptive of the character and use of the material handling equipment manufactured by the Owen Bucket Company were recently issued by that company. The first of these, entitled "Owen Buckets," is a general explanation of the detailed parts of this bucket, followed by a general drawing and table of each class of bucket in turn, together with a folder illustrative of the character of work for which the bucket described is most suitable. The second booklet, "Owen Buckets in Operation," consists essentially of illustrations of the manner in which these buckets have been placed in practical use in excavating, handling materials and dredging, with a short exposition of the manner of using in each class of work.

Reinstating the Commissions. The Cummins bill to restore the rate-making powers of the Interstate Commerce Commission does not have the weight of the best opinion behind it; and to provide that each state commission is to enjoy its former authority over intrastate rates will make the law potentially a nuisance. It is unfair and absurd that the state commissions, with their well-proved partiality and narrowness of outlook, should be allowed to confer benefits upon their respective communities and thus add to the deficit which the national government must pay. So long as the government is running the railroads, it should say to what extent it will subsidize shippers. The Director-General can be trusted to exercise public-spirited discretion.—*Springfield (Mass.) Republican*.

Railway Financial News

ATLANTA TERMINAL.—The Georgia Railroad Commission has authorized this company to issue \$1,200,000 new mortgage bonds to retire outstanding bonds and outstanding certificates of indebtedness. The total authorized (by the company) issue of these new bonds is \$2,500,000.

DELAWARE & HUDSON.—L. F. Loree, president, has issued a statement outlining the financial transactions and the financing of his road since 1900 in answer to the charge made by Glenn E. Plumb before the House Interstate Commerce Committee on Tuesday that the Delaware & Hudson, among other roads, had issued much new stock between 1900 and 1910 at less than its market value, or had given it away as bonuses to its stockholders.

"At the beginning of 1900," says the statement, "the authorized and outstanding capital stock was \$35,000,000. In 1904 the company authorized an increase in its capital stock of \$10,000,000, of which \$7,000,000 was offered to stockholders of record March 19, 1904, at \$135 a share, each stockholder having the right to subscribe for one share of new stock for every five shares owned. The balance of \$3,000,000 of authorized stock is still unissued.

"This \$7,000,000 of capital stock was issued to retire \$5,000,000 of New York Canada bonds maturing May 1, 1904, to defray the cost of standard gaging the Chateaugay & Lake Placid Railway and to reimburse the treasury for advances for construction work. At the subscription price \$9,450,000 was realized on its sale.

"The average market price of the Delaware & Hudson stock in March, 1904, was \$152.45. The lowest price in that month was \$149, on March 12.

"In May, 1905, the company authorized an increase in its capital stock of \$5,000,000 for the purpose of exchanging same prior to April 1, 1916, for Albany & Susquehanna Railroad 3½ per cent bonds, due in 1946, at the rate of five shares for each \$1,000 bond. There has been exchanged thereunder \$1,778,000 of this issue for \$3,556,000 of Albany & Susquehanna bonds, the balance, \$3,222,000, remaining unissued.

"In January, 1906, the company authorized an increase of \$7,000,000 in its capital stock for the purpose of exchanging same for its issue of \$14,000,000 of 4 per cent convertible debentures, due June 15, 1916, at the rate of five shares for each \$1,000 debenture; \$13,500 of capital stock was issued under this authority in exchange for \$27,000 of these bonds, the balance of the authorized increase, \$6,986,500, still remaining unissued.

"Capital stock of the company was retired and cancelled between the years 1900 and 1910, by the operation of the sinking fund, as follows:

Year	Shares	Par Val.	Year	Shares	Par Val.
1900.....	2,000	\$200,000	1905.....	500	\$50,000
1901.....	1,543	154,300	1906.....	2,285	228,500
1902.....	1,386	138,600			
1903.....	1,000	100,000		12,885	\$1,288,500
1904.....	4,171	417,100			

"To those who can intelligently interpret financial transactions the financing of the Delaware & Hudson Company through capital stock during the eleven years from 1900-1910 must appear most fortunate."

GEORGIA COAST & PIEDMONT.—The United States District Court has given permission to Gordon & Friedman to withdraw their bid for the Georgia Coast & Piedmont. The road was offered for sale recently as a going concern. Gordon & Friedman bid for it with the intention of scrapping it. This, under the terms the sale, they could not do.

WAYCROSS & WESTERN.—The Georgia Railroad Commission has authorized this company to issue \$147,000 five-year six per cent notes and \$50,000 stock.

Railway Construction

CANADIAN PACIFIC.—Bids have been asked for grading work on lines in western Canada, as follows: From Wymark, Sask. (mileage 15.8 Vanguard subdivision), east for 25 miles; from Lanigan, Sask., north 50 miles; from Rosetown, Sask., south 25 miles; from Vidora, Sask. (mileage 56.6 Govenlock subdivision), south-easterly 30 miles; from Mildred, Sask. (mileage 22.3 Kerrobert subdivision), west 34 miles. In addition bids have been asked for grading from Russel, Man., north for 12 miles and a contract has been let to the John Stewart Construction Company for grading a line from Acme, Alta., to Drumheller, 37 miles.

Plans for the construction of a new station at Three Rivers, Que., have been completed. The building as designed will be of the French Chateau style and of fireproof construction, faced on the exterior with warm brick and cut stone dressing of limestone. The floors will be of marble and terrazzo tile, the walls treated with marble wainscot and caen stone or marble above. The wood finish throughout will be of Canadian oak.

CHICAGO & NORTH WESTERN.—Work on the elimination of two grade crossings by the construction of one mile of new highway east of the Chicago & North Western tracks, four miles south of Racine, Wis., will be started soon. The work will also involve some incidental changes to the Chicago & Milwaukee electric line. The approximate cost is \$25,000.

CHICAGO & NORTH WESTERN.—The Railway Commission of Wisconsin passed an order on July 11, 1919, which calls for the elevation of 2-4 miles of the main line from Solma to North streets, Kenosha, and on the Kenosha division from the main line junction to Fremont street, a distance of .26 miles. The work will involve 15 subways on the main line, and 1 subway on the Kenosha division. All the work inside of the right-of-way will be paid for by the railroad except changes in public utilities while the city will pay for all pavement and street improvements and sewers outside of the right-of-way and assume the responsibility for all changes in property. The estimated cost of the work is \$2,650,000.

The Chicago & North Western has entered into a contract with the city of Kenosha, Wis., for the division of the cost of the Main street improvement project, which will include a 200-ft. viaduct and a 140-ft. bascule bridge. As the viaduct extends over the industrial tracks of the Chicago & North Western, its share of the cost of the improvement will amount to \$40,000, while the cost to the city will be \$310,000.

NORTHERN PACIFIC.—This road has completed and placed in operation a branch line extending from Hesper, Mont., seven miles north of Laurel, 41 miles to Rapelje, serving the Lake Basin country.

TEXAS ROADS.—Plans are being made to build a line from New Castle, Tex., south for about 150 miles. Hammon & Kell, Wichita Falls, are interested and Colonel J. R. Holman is the chief engineer. Grading contracts are reported let for work on 45 miles near Ranger. The Missouri, Kansas & Texas is contemplating the sale to Hammon & Kell, of the Wichita Falls & Southern, which operates from New Castle north to Wichita Falls, 53 miles, to form a north extension of the proposed new line.

WISCONSIN SOUTHERN RAILROAD COMPANY.—This company is planning to construct its railway over that part of its chartered line from Milwaukee to a connection with roads reaching Chicago and the belt lines around Chicago. The company has extensive charter rights in counties northeast from Madison, Wis., to Sturgeon Bay and also with counties northwest from the state line between Illinois and Wisconsin, through Kenosha, Racine, Milwaukee to Marshfield. The company is capitalized for 50,000 shares of stock at \$100 each, of which 35,000 shares are preferred and 15,000 shares are common stock. Charles B. Smith, of Fond du Lac, Wis., is president of the company.

Railway Officers

Railroad Administration

Executive, Financial, Legal and Accounting

A. F. Dodd has been appointed treasurer and auditor for the receivers of the Denver & Salt Lake, with headquarters at Denver, Colo., succeeding **J. R. McCoy**, who has been granted a leave of absence on account of illness and who, upon his return to service, will be assigned to other duties.

Operating

M. E. Welch, trainmaster on the New York Central lines east, at Buffalo, N. Y., has been appointed assistant superintendent of the Buffalo division, with headquarters at Buffalo.

H. L. Wright has been promoted to general inspector of the operating department of the Mobile & Ohio and the Southern Railroad in Mississippi, with headquarters at Mobile, Ala., performing such duties as may be assigned to him by the general superintendent; **V. J. Thompson** has been appointed supervisor of safety, with headquarters at Mobile, Ala., vice **Mr. Wright**.

John M. Davis, manager of the New York properties of the Baltimore & Ohio, including the Staten Island lines, with headquarters at New York, has resigned to become president of the Rock Hill Iron & Coal Company and associated corporations, including the East Broad Top Railroad and Coal Company, with office at New York, effective September 1. Mr. Davis was born on November 5, 1871, and began railway work in 1888 as a freight trainman on the San Antonio & Aransas Pass. From September, 1891, to July, 1898, he served consecutively as stenographer to the superintendent of the Gulf, Colorado & Santa Fe; chief clerk to the superintendent of the Mexican Central; clerk in the general manager's office of the Great Northern, and assistant superintendent of the Great Northern. In 1898, he was made superintendent of the Breckenridge and Montana divisions of the Great Northern, and left that road in 1900, to go to the Erie as superintendent at Scranton, Pa. Two years later he was appointed superintendent of the Union Steamboat Line of the Erie, at Buffalo, N. Y., and from August, 1902, to May, 1903, was superintendent of the Allegheny division of the Erie. He then returned to the Great Northern, where he served as super-promoted to assistant general superintendent of the Central district. In 1907, he went to the Oregon Short Line as assistant general superintendent, with headquarters at Salt Lake City, Utah, and was subsequently made acting general superintendent and later general superintendent. In 1910, he was appointed general superintendent of the Central district of the Southern Pacific, with headquarters at San Francisco, Cal. He entered the service of the Baltimore & Ohio on January 1, 1914, as assistant general manager at Cincinnati, Ohio, of the Baltimore & Ohio Southwestern-Cincinnati, Hamilton & Dayton, and later in the same year, was promoted to general manager of these lines. In July, 1916, he was appointed vice-president in charge of operation



J. M. Davis

and maintenance of the Baltimore & Ohio System, with headquarters at Baltimore, Md., and held that position until July 1, 1918, when, under federal control of the railroads, he was appointed manager of the New York properties of the Baltimore & Ohio, including the Staten Island lines, as above noted.

Engineering and Rolling Stock

Colonel Frederick Mears has been appointed by the President as chairman and chief engineer of the Alaskan Engineering Commission, in charge of the construction of the government railroad in Alaska. Colonel Mears was formerly a member of this commission but retired to return to active duty with the army during the war. He was with General Goethals during the construction of the Panama Canal and the Panama Railroad, and has been connected with the management of the American railroad lines in France. **William C. Edes**, heretofore chairman, has been appointed consulting engineer to the commission.

Traffic

W. B. Ferguson has been appointed chief of the tariff bureau of the Cleveland, Cincinnati, Chicago & St. Louis and the Louisville & Jeffersonville Bridge, with headquarters at Cincinnati, Ohio, succeeding **Walter Nichols**, deceased.

C. E. Hochstedler, chief of the tariff bureau of the Detroit, Toledo & Ironton, at Detroit, Mich., has been appointed assistant general freight agent, with headquarters at Detroit, vice **J. A. Scheuerman**, resigned to accept service elsewhere, and the position of chief of tariff bureau has been abolished and **W. G. Howard** has been appointed commercial agent, with headquarters at Detroit, Mich.

Colonel Hal S. Ray, formerly assistant general passenger agent of the Chicago, Rock Island & Pacific, with headquarters at Des Moines, Ia., and for the last two years in military service as assistant chief of the inland traffic service of the war department, and on the general staff of the American Expeditionary Forces abroad, has received his discharge from the army and resumed his former position at Des Moines.

Charles D. Quinn, whose appointment as assistant general freight agent of the Louisville & Nashville, with headquarters at Louisville, Ky., has already been announced in these columns, was born on December 29, 1874, at Louisville, and was educated in the high school of his native town. He began railway work on March 16, 1896, with the Louisville & Nashville as stenographer to the assistant general freight agent. He subsequently served in the soliciting department, and then was consecutively rate clerk, chief rate clerk, assistant chief clerk and chief clerk until his recent appointment as assistant general freight agent of the same road.

Purchasing

J. D. East has been appointed division storekeeper on the Baltimore & Ohio Eastern Lines, with headquarters at Keyser, W. Va., vice **C. S. Filler**, resigned.

G. H. Greer, storekeeper on the Yazoo & Mississippi Valley, with headquarters at Vicksburg, Miss., has been appointed storekeeper for the Gulf, Mobile & Northern, with headquarters at Mobile, Ala., vice **R. C. Brown**, resigned.

Obituary

John S. Shaughnessy, formerly purchasing agent for the Minneapolis, St. Paul & Sault Ste. Marie, and more recently connected with the construction department of the Canadian Pacific, died at his home in Chicago on August 10, after an illness extending over a year. He was 55 years old. Mr. Shaughnessy was a brother of Lord Shaughnessy, chairman of the board of directors of the Canadian Pacific.

Labor Unions in France. Before the war the French Labor Confederation had about 300,000 members. At the present time their membership has increased to about 1,500,000.

EDITORIAL

Railway Age

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During the months of April, May and June the Railroad Administration steadily and substantially reduced the rate at which it was incurring a deficit. The

Financial Showing Improving

financial showing made in June was relatively the best up to that time this year. In January the net operating income earned was 33 per cent of the guaranteed standard return of the companies; in February, it was only 21 per cent, and in March it was less than 16 per cent. It looked then as if the deficit for the year would be \$750,000,000. In April, however, net operating income was 39 per cent of the guaranteed return; in May it was 51 per cent; and in June it was 64 per cent. The improvement is partly due to some revival of business since March, but more largely to the energetic measures which have been adopted by the Administration and the operating officers to effect economies. The ratio of expenses to earnings in February and March was over 92 per cent. It was reduced in each of the months of April, May and June, and in June was less than 84 per cent. If the Railroad Administration should do relatively as well during the last six months of the year as it did in April, May and June its total deficit for the year would be just about \$500,000,000, while if it should do relatively as well in the last six months of the year as it did in June its total deficit for the year would be only about \$415,000,000, of which about \$243,000,000 was actually incurred in the first six months of the year. Of course, the recent strikes will have an adverse effect upon the operating and financial results; and if further advances in wages are granted they will cause the deficit to begin to increase at an accelerated rate again.

The railroads of the Southern region under the direction and stimulus of Regional Director B. L. Winchell are engaged

Improving the "On Time" Record

in a form of rivalry which deserves to be recommended for imitation to the railroads of other regions. This is a rivalry for increasing the number of trains that arrive at destination on time. One of the criticisms which long have been made, and justly made, against the operation of the railroads of the United States, has been that they have had many late passenger trains. This is one respect in which before the war their service was inferior to that of most of the railways of Great Britain, France and Germany. The railways of what is now the Southern region bore the reputation of having a relatively larger number of late trains than those of almost any other section, although whether they deserved the reputation cannot be shown. In June, of 50,949 trains operated in the Southern region 94.4 per cent either were on time or made up time after having been received late from connections. The number of trains which actually arrived on time at their final terminals was 92 per cent of the total. A still better record was made in May, when 95.3 per cent of all passenger trains either arrived at their final terminals on time or after having made up time which had been lost on connecting lines. The best record made by any road in June was that of the Illinois Central, whose "batting" average was 96.6 per cent. The Southern railroad, operating one-third of all the trains

handled on the larger roads in the region, had a record of 95.6 per cent of trains, which either were on time or made up time lost by connections, and of 92.6 per cent of trains which were on time at the final terminals. One of the very most important features of good passenger service is trains that maintain their schedules. The Southern region has started a form of rivalry which should not only be imitated in other regions now, but continued after the railroads are returned to private operation.

Attention is directed to the report appearing on another page of this issue on the adjustment of salaries for subordinate engineering positions recently

Justice for the Technical Men

authorized in the Northwestern region. This was prepared in the form of a classification of duties and responsibilities for the various positions, together with maximum and minimum rates of compensation for each grade. It is the work of a committee of three chief engineers, who are to be commended for the fairness, clearness and logical arrangement of the schedule. This is the first real recognition accorded the technical employees. They were not mentioned in any of the supplements to Order No. 27, and while the officers of a few individual roads took it upon themselves to place interpretations on Supplements 7 and 8 so as to apply to draftsmen and subordinate engineers, this was not generally done. Consequently many of the technical men have had a valid grievance against the Administration. The matter of salary adjustment for these men was the subject of a hearing before the Board of Wages and Working Conditions early in the year, but no action was taken and the matter was finally transferred to the regional directors. The Northwestern region has been the first to act officially in this matter and its officers deserve a great deal of credit for recognizing the justice of this case and for having the courage to set a precedent for the other regions.

Premier Lloyd George's speech before the House of Commons on Monday of this week, which was reported at length

Government Control and Strikes

in most of the leading daily papers, was of special importance in more ways than one. The premier had considerable to say in his three-hour address concerning Britain's serious financial condition, but we should like to refer particularly to the decision he announced that the government had rejected the majority report of Justice Sankey's commission which proposed the gradual nationalization of the coal mines. The government, he said, would launch, instead, a plan for partial state control, by which the government will buy out the owners of coal lands, who receive royalties from the mining companies, give the miners a share in the control of the mines, organize the mines into districts and establish a fund for improving the living conditions of miners. This decision is of special importance because it indicates that the British government has finally taken a definite stand against nationalization. Judging from what the premier said as to nationalization, it is apparent that the British government has at last discovered that government ownership does